University of Alberta

French Immersion in Different Settings: A Comparative Study of Student Achievement and Exemplary Practices in Immersion Centres Versus Dual- and Multi-Track Schools

by

Gilbert Guimont

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Education

Department of Educational Policy Studies

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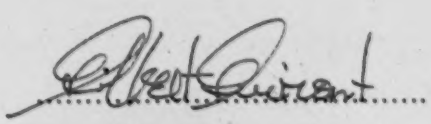

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Cette thèse est dédiée à mes parents, Bertrand et Denise, qui m'ont appris l'importance de sans cesse continuer à apprendre et qui m'ont soutenu dans tout ce que j'ai entrepris.

Abstract

The purposes of this research were (a) to compare the results of grade 6 students enrolled in immersion centres to the results of immersion students attending dual-track or multi-track schools and (b) to look at the practices of the schools where the grade 6 students have achieved the best academic results. Alberta's provincial achievement tests' data over a five-year period, in the four core subjects taught in French (mathematics, science, social studies and French language arts) were examined to reach the first purpose. The design of this study combined the quantitative and qualitative methodologies to establish a broad database in order to develop a better knowledge and understanding of the findings associated with the student achievement results (Gall, Borg, & Gall, 1996; Glesne, 1998). Results of Grade 6 Alberta achievement tests from the 1995-1996 to the 1999-2000 school year were used to determine if students in immersion centres achieved higher scores than immersion students in dual-track and multi-track schools. The results also helped to identify the 10 immersion schools that have students with the highest levels of achievement and the principals that were leading them. Six principals were interviewed and interpretational analysis was the method used to look at the data. The findings of the study indicated that students enrolled in immersion centres achieved better results than their dual-track or multi-track counterparts. The principals of the top achieving schools mentioned that their students' success was due to the fact that high quality teachers were hired, good relations were established between teachers, support for struggling students was in place, parents were involved in their children's learning, and principles of good leadership were exercised in the school. Other findings include the reasons given by the principals to explain why

immersion centre students achieved better results than immersion students in dual-track or multi-track schools.

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CHAPTER 1

FRENCH IMMERSION IN DIFFERENT SETTINGS: A COMPARATIVE STUDY OF STUDENT ACHIEVEMENT AND EXEMPLARY PRACTICES IN IMMERSION CENTRES VERSUS DUAL- AND MULTI-TRACK SCHOOLS

Introduction

French immersion has been a program of choice for parents and has spread throughout Canada since its beginning in St. Lambert, Quebec, in the early sixties. They have been part of Alberta's educational landscape for over 30 years.

Tardif and Weber (1987) mentioned that "The growth of immersion education within the North American context has generated a great deal of interesting research on the effects of bilingualism on students' academic, social, linguistic and cognitive development" (p. 67). They added:

> The major thrust of research in French immersion has been in the area of program evaluation and student evaluation. The focus has been on comparing the progress of students enrolled in immersion programs with that of peers enrolled in regular English programs. (p. 67)

The results of research that used standardized tests to measure and compare student achievement helped reassure parents that their children's English language skills would not suffer from their exposure to French in a school immersion setting (Andrew, Lapkin, & Swain, 1979, 1980; Barik & Swain, 1975, 1978; Cashion & Eagan, 1990;

Harley, Hart, & Lapkin, 1986; Swain & Lapkin, 1982; Swain, Lapkin, & Andrew, 1981).

Over the years, school authorities across Canada have developed different models to deliver French immersion programs. These models are: immersion centres (also called single-track schools), dual-track schools, and multi-track schools. Considering that parents are selecting immersion programs to allow their children to effectively learn French, it is interesting to note that limited research was conducted to determine if one of the models used to deliver French immersion to students has proven itself more successful in fostering better academic results (Lapkin, Andrew, Harley, Swain, M., & Kamin, 1981). Interestingly, Lapkin (1991) stated that the results from this study by Lapkin et al. (1981) "cannot safely be generalized" (p. 4) because so subsequent replication of the study happened. This comment encouraged the researcher to study this specific area.

Both a quantitative method and a qualitative method were used in this research to thoroughly probe and report (a) the model of French immersion instruction delivery in which grade 6 students achieved the best academic results on provincial achievement tests written in French, (b) the subjects that had the greatest and smallest achievement gap between the students in immersion centres and the immersion students in dual-track or multi-track schools, and (c) the exemplary practices that may have played a role in the high achievement results experienced by the immersion students of some schools.

I believed that (a) the immersion centre model helped French immersion students achieve better academic results in the subjects taught in French and that the

top achieving schools were immersion centers, (b) French language arts was the subject with the greatest achievement gap and that the remaining three core subjects would be showing a relatively similar smaller achievement gap than French language arts, and (c) that several exemplary practices had a positive impact on student achievement.

Background

When I moved to Alberta in the late nineteen-eighties to teach French immersion, I realized that school authorities in Alberta had adopted different models to offer French immersion to English-speaking parents who want their children to learn Canada's other official language: My previous experience as a second language monitor in immersion schools in the Ottawa region had only exposed me to the dual-track school model of delivery of immersion instruction. At the time, I did not know that other models existed. In addition, the school authority that hired me to teach in Alberta was using the immersion centre model.

It became clear to me that the immersion centre where I worked functioned very much like the Francophone schools I had experienced growing up in Quebec. Outside of the English language arts and religion classes, English was used in the school only to communicate with parents. This was a comfort to me considering my limited knowledge of English at the time.

An interesting fact I observed was that, most years, more than half of my students would not be of the Catholic faith even though the school was part of a separate school authority. I began to wonder why non-Catholic parents would decide to send their children to a French immersion school in a separate school authority where they would be taught religion rather than to the dual-track French immersion school

belonging to the public school authority and located a few blocks away from where I taught. Many parents I talked to over the years mentioned the proximity of the school and the fact that the school was a newer building as factors to explain their choice. However, the reasons cited by most parents were the French atmosphere that exists in the building and the high quality of French instruction given at my school.

Their comments lead me to wonder if the model used to deliver the immersion program would have an impact on the students' achievement test results in all the subjects taught in French. Furthermore, I wanted to know if the schools where the immersion students were achieving the best results had exemplary practices that fostered academic success.

Statement of the problem

The purposes of this research were (a) to compare the results of grade 6 students enrolled in immersion centres to the results of grade 6 immersion students attending dual-track or multi-track schools and (b) to look at the practices of the schools where the grade 6 students have achieved the best academic results. Alberta provincial achievement tests' data, over a five-year period, in the four core subjects taught in French (mathematics, science, social studies and French language arts) were examined to reach the first purpose.

During my years of teaching French immersion, I had many conversations with other immersion colleagues about how frequently French was used in our schools on a daily basis and how visible French was outside of our respective classrooms. We realized how related our answers were to the model of immersion delivery that was in place in our schools. I remember how we speculated on the effect a model might have

on the students and their acquisition of the French language. As time went by, these speculations and the interest I developed regarding assessment, led me to get involved with the Learner Assessment Branch of Alberta Learning. My teaching experience and my work at Alberta Learning led me to review the literature on topics related to the assessment of French immersion students. This, in turn, helped me frame the questions for this study.

Specific Research Questions

1. Which model of French immersion instruction delivery (immersion centres and dual-track or multi-track schools) allows its students to achieve the best results on Alberta's provincial achievement tests? How can this be explained?
2. What core subjects show the greatest difference between students in immersion centres and immersion students in dual-track or multi-track schools? How can this be explained?
3. What core subjects show similar achievement levels between students in immersion centres and immersion students in dual-track or multi-track schools? How can this be explained?
4. Are there some high achieving French immersion schools that are using a model different than the one that is allowing its students to achieve the best results on Alberta's provincial achievement tests?
5. How do the highest achieving schools explain their results?
6. What exemplary practices might account for the excellent achievement results experienced by some schools?

Definition of Terms

To provide consistent meaning throughout the document, the following terms are defined:

Dual-track schools. Schools that house students enrolled in a French immersion program and students enrolled in a regular English program.

Early immersion program. Immersion program that starts in kindergarten or grade 1.

French immersion program. An educational program in which core subjects prescribed by the approved provincial Program of Studies are taught in French to non-French speaking students.

Immersion centres. Schools that house only students enrolled in a French immersion program. They are sometimes called single-track schools.

Exemplary practices. Any educational decisions or ways of delivering an educational program that might have an effect on the learning of students. For example, practices could be related to the selection of teachers and how well they master French, the grade at which English begins to be taught, the presence of French-speaking administrators and support staff members in the school, the availability of quality French books and textbooks, various instructional methods and the language used for announcements and during assemblies or other activities.

Late immersion program. Immersion program that starts in grade 6 or grade 7.

Multi-track schools. Schools that house students enrolled in a French immersion program, students enrolled in a regular English program and students enrolled in a third program like Ukrainian bilingual or Christian Logos program.

Provincial achievement tests. Tests that are developed by Alberta Learning with the help of teachers. These tests reflect the Alberta Program of Studies and are administered at the end of each year to all Alberta students registered in grades 3, 6, and 9. Four core subjects are tested each year in grade 6 and grade 9: English language arts, mathematics, science, and social studies. A fifth core subject is also tested: French language arts. This test is only administered to Francophone and immersion students. French translations of the tests in mathematics, science and social studies are given to Francophone and immersion students instead of the English versions. They are multiple-choice tests. The English language arts and French language arts tests have two components: a reading comprehension component that is comprised of multiple-choice questions and a writing component in which students have to write two different texts. Under the supervision of Alberta Learning staff, teachers centrally mark the texts of all the students each summer in Edmonton. The results of the writing component are then blended with the results of the reading component. The mathematics tests in grades 3 and 6 each have two different components: one based on numbers and operations and a second based on problem solving. Both components for grade 6 mathematics are multiple-choice tests. However, for the grade 3 Number and Operation component, students have to write the answers to the equations in the test booklet. For the second component, grade 3 students have to answer multiple-choice questions. Results for both components in mathematics are blended together to produce

one final mark. Grade 3 students are only tested in two subjects: English language arts and mathematics.

Rationale of the Research

In Canada, there are different models of schools that offer French immersion programs: immersion centres, dual-track schools and multi-track schools. Very little research has been done to compare the achievement of the students enrolled in immersion centres to the achievement of the students attending dual-track and multi-track schools. Moreover, research looking at exemplary practices in French immersion schools has been scarce.

The results of this research could be used to identify the most effective model to deliver French immersion programs or to create a new model that could prove more effective. This could help parents make the choice of enrolling their children in either a French immersion centre or a dual-track school, according to the one that has the potential of helping their children achieve better academic results in French language arts and all the subjects that are taught in French.

The results of this research might also have an impact on school authorities who are looking at setting up a French immersion program and on school authorities that offer French immersion programs. For example, some school authorities either experience a decline in the number of students enrolled in French immersion or a decline in the achievement of their French immersion students. Providing examples of educational practices might help these authorities develop new guidelines that would enhance their French immersion programs. The results of this research might also encourage school authorities to adopt the French immersion model that is proven to be

most successful for helping students achieve better results. Furthermore, the identification of exemplary practices could also help teachers and administrators improve the French immersion program in their schools.

Outline of Thesis

In Chapter 1, the problem at the core of this study is stated, the research questions are exposed, and the background of the study is provided. Specific terms that are used throughout the research are defined and the rationale of the study are also presented in this chapter.

In Chapter 2, literature is reviewed first to help understand how immersion programs have been studied and how they continue to interest scholars. Various topics include (a) the effects of second-language learning on the learning of English, (b) the development of second-language comprehension competency, (c) the development of French oral skills, (d) errors in the second language and ways to correct them, (e) effective second-language instructional techniques, (f) the results of early, middle, and late immersion students, (g) the training of immersion teachers, (h) the professional development needs of immersion teachers, (i) immersion students experiencing academic difficulties, (j) students expressing their thoughts about their immersion experience, and (k) school boards and provincial studies evaluating their immersion programs. Second, the review will look at what the literature has said about the advantages and drawbacks of immersion centres, dual-track schools and multi-track schools. Next, the literature review will highlight the findings related to the effect of tests scores, which are tools used to measure student achievement. Finally, practices promoted by principals that appear to affect student achievement will be looked at in

the literature review. These practices consist of (a) the school climate, (b) the allocation of resources, (c) the norms, policies, goals, and vision of the school, (d) the hiring and supervising of quality teachers, and (e) the involvement of parents.

Chapter 3 outlines the method applied to attend to the research questions presented in Chapter 1 and explains the quantitative and qualitative approaches that were used. The selected participants are described and the procedures followed for data collection and analysis are presented. In this chapter, threats to the validity and trustworthiness of the information and data assembled are also addressed and attention is paid to the particular ethical considerations of this study.

Chapter 4 is divided into five major sections. A description of the grade 6 provincial achievement tests is given in the first section. The two types of quantitative data used in the study are reported in the second section. This is followed by an explanation of how tables were created to organize the provincial results. Next, the quantitative data are analyzed. In the last section, an interpretation of the results is provided.

Three components are found in Chapter 5. First, a description of the student body and of the schools in which the principals who were interviewed worked is given. Cultural characteristics of the French immersion teachers of the five schools and the principals' professional background are provided as well. Second, the findings of this research based on interpretational analysis of the data are organized into themes. The main themes are: hiring quality teaching staff, having good relations between teachers, support for struggling students, the involvement of parents, and the principal's leadership. In the last part of this chapter, the principals are asked to explain, in light of

the quantitative data presented to them, the results of immersion students' performance on achievement tests written in French. The reasons given by the principals were clustered under three main headings. These headings are: (a) immersion centres students achieve the best results, (b) social studies: greatest achievement gap; and (c) French language arts: smallest achievement gap.

Chapter 6 is divided into four parts. The first part provides a summary of the study, which includes the purpose, the method used to gather and analyze data, the findings, the delimitations and the limitations. This is followed by a section containing personal reflections on the research. The third part presents recommendations for practice. Implications for future research are listed in the last section.

CHAPTER 2

LITERATURE REVIEW

Introduction

Over the last 30 years, French immersion programs have been a part of the Canadian educational landscape. Since its modest beginnings in the mid-1960s in St. Lambert, a suburb of Montreal, French immersion has spread across Canada. Immersion has also inspired many researchers over the last three decades. McGillivray (1983) writes that immersion has been more exhaustively researched than any other innovative program in education. Immersion programs continue to interest scholars and the body of research grows every year. To better understand the extent to which immersion has been studied, a brief look at the various topics that have been explored by researchers is warranted.

First, this review will explore what the French immersion literature has to say about (a) the effects of second-language learning on the learning of English, (b) the development of comprehension competency, (c) the development of French oral skills, (d) errors and ways to correct them, (e) effective second-language instructional techniques, (f) the results of early, middle, and late immersion students, (g) the training of immersion teachers, (h) the professional development needs of immersion teachers, (i) immersion students experiencing academic difficulties, (j) students expressing their thoughts about their immersion experience, and (k) school authorities and provincial studies evaluating their immersion programs. Second, the review will examine what the literature has said about immersion centres, dual-track schools and multi-track schools. The advantages and drawbacks of each type of school will be presented. Third, the

literature review will highlight the findings related to the effect of test scores, which are tools that are regularly used by various stakeholders to measure student achievement. Finally, exemplary practices promoted by principals that appear to affect student achievement will be looked at in this literature review. These practices include (a) the school climate, (b) the allocation of resources, (c) the norms, policies, goals, and vision of the school, (d) the hiring and supervising of quality teachers, and (e) the involvement of parents.

Overview of the Research on French Immersion Programs

A. How Does the Learning of a Second Language Affect the Acquisition of the Mother Tongue?

When French immersion programs first started, researchers focused on the impact that these programs had on the learning of the English language. For this reason, there is a large body of research looking at this specific topic (Andrew, Lapkin, & Swain, 1979, 1980; Barik & Swain, 1975, 1978; Swain & Barik, 1976). These early studies concluded that, by grade 3, students enrolled in French immersion achieved better results on several measures of English language skills than students enrolled in a regular English program.

Over the years, researchers continued to examine the effects of learning French on the development of different English language skills. Reading development in both French and English in early French immersion is a topic that has been investigated (Cashion & Eagan, 1990; Geva & Clifton, 1994). Geva and Clifton conclude, that in the early years, when children are taught to read in French, fluent reading is developing at a slower pace in their first and second languages. Yet, there are no differences between

children taught in their first and second languages when we compare children who reached the same developmental reading level on accuracy and comprehension. On the other hand, within the same reading level, children taught to read in French are at a disadvantage on speed and fluency measures compared to children who are taught to read in English.

Cashion and Eagan (1990) observed a group of twelve French immersion students of average ability between the beginning of grade 1 and the end of grade 3. They discovered that, at the end of grade 3, even without formal instruction in English, nine of these students read in English above grade level expectation while only one was one grade below grade level expectation. Results of this study support earlier findings by Genesee (1984) and Swain, Lapkin, and Andrew (1981) showing that English children, after three or four years in French immersion, can perform as successfully on English language tests as their peers who were not in French immersion. Furthermore, the findings of Harley, Hart, and Lapkin (1986) indicate that bilingualism promotes metalinguistic skills in making grammatical judgements in English, the first language of the students. They also determined that, after grade 3, immersion students are better than regular program students at inferring meaning from the broad written context.

Another aspect of language acquisition that was investigated is the spelling of English words by immersion students (Cummins & Swain, 1986; Fagan & Eagan, 1990; St. Pierre, Laing, & Morton, 1995). Fagan and Eagan found predominantly phonetic spelling in both French and English among grade 3 students who had been only instructed in French. Cummins and Swain showed that there is a strong tendency for grades 2 and 3 early immersion students to score significantly below comparison groups

on standardized spelling tests. St. Pierre et al. (1995) observed that grade 3 students have a tendency to represent specific phonemes (sounds) embedded in English words by French graphemes (letter or letter combinations that represent a sound). This tendency increased as the words presented became less familiar. They revealed that, by grade 6, the influence of French had greatly diminished as children had gained a greater control of English spelling. Cummins and Swain discovered that by grade 8 immersion students often surpass the level of English spelling proficiency attained by students from the regular program.

B. The Development of Comprehension Competency for Second-Language Students

English-speaking students entering kindergarten in immersion programs were studied to discover if they understood what was going on in their new second-language environment (Pelletier, 1998, 1999; Weber & Tardif, 1991). Pelletier (1999) found that the use of more complex scripts than simple scripts by French immersion students showed that they understood what was going on at school. In their description, the French immersion students accurately reported a greater number of events and activities that took place at school than children in regular programs. Weber and Tardif determined that children's sense-making focussed on specific classroom contexts in which French words were used, on non-verbal communication (gestures, facial expressions, etc.), and on the teacher behaviour expectations related to these contexts. They discovered that, after a little more than two months of instruction in a French immersion class, the children had achieved what appeared to be a high level of comprehension competency.

C. The Development of French Oral Skills

The development of oral skills in French is a field that also has drawn the attention of scholars (Walsh & Yeoman, 1999). They observed that, because of language limitations in French, most students in kindergarten to grade 3 classes were unable to convey detailed descriptions and were only capable of expressing feelings in simple terms. They also found that language limitations hindered exploratory conversation where students, through their own questions and observations, could extend their knowledge and understanding of concepts.

D. Errors Made by Second-Language Learners and Techniques Used to Correct Errors

Errors made by students when they use their second language, either when they write or express themselves orally, have been the focus of different reports (Calvé, 1988; Duchesne, 1995; Froc, 1995; Hammerly, 1985; Harley, 1993; Harley & Swain, 1984; Lyster, 1987, 1998, 1999; Obadia, 1984; Pellerin & Hammerly, 1986; Selinker, Swain, & Dumas, 1976; Spilka, 1976). As a whole, these studies indicate that, when immersion students express themselves, they make a significant number of errors of many types (grammatical, lexical, sociolinguistic, etc.) in their utterances and that these appear to be fossilized errors, which are misinterpretations that they have internalized. Using the results of several studies, including the ones by Selinker et al. (1976) and Spilka, on immersion students' errors, Hammerly stated that immersion programs are a failure because students who have been in immersion for more than six years continued to produce many errors in their writings and in their oral communications. Hammerly believes that the immersion approach of language learning is not working and he

proposes that a five-step method to develop bilingualism in students would be more efficient than the immersion model.

Researchers have offered techniques to help students correct the errors they make. Froc (1995) uses her own experience as a classroom teacher to present the advantages of using a writing conference as a tool that encourages students to correct their fossilized errors. Lyster (1998) discovered that students more successfully corrected their decoding and pronunciation (phonological) errors when teachers were implicitly reformulating the errors (recasting) and that grammatical and lexical corrections occurred more frequently when teachers would elicit reformulations, use metalinguistic clues, repeat the error or ask for clarification. Lyster (1999) determined that recasting is most effective when the teacher first repeats the error of the student and then formulates correctly what should have been said. Harley (1993) revealed that mistakes made by students related to the gender of words and the difference between "être" and "avoir" could be alleviated if the target features of the second language code, such as pronunciation, syntactic structures, vocabulary, sociolinguistic functions and features of connected discourse, would be strategically taught. Calvé (1988) offered general rules to determine which types of errors should be corrected by teachers during oral communication. For example, he believes that errors threatening the success of the communication such as important lexical and pronunciation mistakes should be addressed when they occur.

Duchesne (1995) observed that the oral competency of students improved sensibly year after year in the early grades and that the frequency of their errors decreases regularly up to grade 3 and still continues to decrease at a slower rate between

grades 4 and 6. Duchesne also mentioned that teaching the French linguistic code in certain situations might help students acquiring it, and help reduce the incidence of fossilized errors.

E. Instructional Techniques Used to Improve Second-Language Learning

Researchers have investigated the effects of numerous teaching techniques on second-language learning (Lapkin & Swain, 1996; Romney, Romney, & Braun, 1989; Wright, 1996). In their study, Romney et al. (1996) had stories read aloud to students for 30 minutes everyday. The effects on the students indicate that their receptive vocabulary, their ability to recall a story line, and their capability to communicate or make themselves understood had significantly improved. Lapkin and Swain examined various instructional strategies to understand how language and content teaching are integrated in an immersion context. They mention that expanding vocabulary instruction to other areas of the curriculum, planning for systematic review, developing students' word-building skills, and involving students in activities where they need to express themselves more accurately are ways to help build a richer French lexicon. Wright demonstrates that vocabulary instruction taught within specific contexts and designed to increase the use of specific verbs is an effective way to broaden the French lexicon of students.

F. Results of Early, Middle, and Late Immersion Students

School authorities who decided to implement immersion programs could choose between different options: early, middle or late immersion. Students in early immersion started to learn French in either kindergarten or grade 1 while students in middle immersion started to learn French in grade 4. Grade 7 is the entry point for late

immersion students. Researchers determined that junior high students who had been enrolled in early immersion were more proficient in French than students in either the middle immersion or the late immersion programs (Day, Shapson, & O'Shea, 1988; Lapkin, Hart, & Swain, 1991; Swain & Lapkin, 1982). When compared at the end of grade 9, the early immersion students outperformed their middle and late counterparts in the receptive (listening, reading) and productive (speaking, writing) skill areas.

G. The Training of Immersion Teachers

Because of its rapid growth throughout Canada in the 1970s and 1980s, many immersion teachers were suddenly needed in every province. The training of qualified immersion teachers became a pressing issue. Universities in the late 1970s and early 1980s started to develop training programs aimed at future immersion teachers (Obadia, 1996). Specialized courses about immersion pedagogy, the development of language skills, the methodology of teaching second language, and the methodology of teaching various subjects in an immersion context were put in place in different universities. Efforts were also made by researchers to gather in-depth information about the theoretical framework of immersion teacher education programs, their clientele, and participants' experiences (Day & Shapson, 1993). Personal background information from teachers about their native language as well as their teaching experience and educational background were also gathered to show diversity demographically (Day & Shapson, 1996; Wilton, Obadia, Roy, Saunders, & Tafler, 1984).

H. Professional Development Needs of Immersion Teachers

Another topic of research that has been explored is the professional development needs of immersion teachers (Day & Shapson, 1996; Wilton & al., 1984). Teachers

mentioned that workshop participation was the most frequent form of professional activity they experienced. They identified cooperative work in planning as a most important activity for professional development. Teachers indicated that the need areas in professional development were greatest in relation to teaching French language arts in immersion, developing curriculum and resources, teaching subject matter in immersion, and varying teaching strategies.

I. Immersion Students Experiencing Academic Difficulties

Students experiencing difficulties in French immersion were subjects of studies (Rousseau, 1999, Wiss, 1989, 1993). Wiss (1989, 1993) and Bruck (1978) stated that many immersion children who transferred to the English program because they had academic difficulties continued to struggle in the regular program. Wiss (1993) mentioned that the consistency across languages of error types made by underachieving students in reading and spelling suggests that levels of literacy are not language specific. In her research, Rousseau showed that, when students who experience difficulties in immersion are offered remedial services to help them, their level of achievement and their self-esteem improve. Conversely, Wiss (1989) and Bruck suggested that there are some students who are not ready, both cognitively and linguistically, to meet the challenge of an immersion environment.

Cummins and Swain (1986) reported that students with IQ below average understood as much spoken French as did the students who had an IQ above average and that they had similar results as students with an IQ above average on the following measures of oral production: grammar, pronunciation, vocabulary, and fluency of communication. They did not find evidence that the students with an IQ below average

in immersion were farther behind in English skills development or achievement than were the students in regular programs who had an IQ below average.

J. Students Relating Their Immersion Experience

Researchers also studied the students enrolled in French immersion programs. Graduates of immersion programs were interviewed to gather their views regarding their immersion experience, their career patterns, their use of French outside of school, the possibility of enrolling their future children in immersion, and the improvements they would make to the program (Day, 1986; Foster, 1998; Husum & Bryce, 1991). Students who left immersion programs at the high school level were also studied to discover why they would prefer to transfer to an English program (Lewis & Shapson, 1989). These students were not satisfied with the teachers instructing them or with the content of the courses, and they felt they would get better grades in English. Educators, administrators and language coordinators were also studied to get their views on the problem of attrition in immersion programs (Obadiá & Thériault, 1995). Interestingly, the people interviewed in this study also mentioned quality of teaching as an important factor of attrition. Academic difficulties, parents' influence and limited choice of subjects were the other reasons they believed influenced the decision of students to leave immersion.

K. School Authorities and Provincial Studies Evaluating Their Immersion Programs

Finally, many provinces and large school authorities conducted studies over the years to look at the successes of immersion programs and their students (Alberta Education, 1990; Barik & Swain, 1975, 1978; Crawford, 1984; Day et al., 1988; Lapkin & Swain, 1984; Manitoba Education and Training, 1993; Ministère de l'Éducation du

Manitoba, 1983; Swain & Lapkin, 1982). These reports looked at students' results on a variety of standardized tests to demonstrate the effectiveness of the immersion programs. The students were evaluated on different aspects of language learning ranging from reading abilities to writing and oral communication abilities. Globally, these reports showed that immersion programs were successfully fostering the students' acquisition of French and that, by the end of grade 6, immersion students were achieving comparative levels of competency in English as their regular program counterparts.

Immersion Centers Versus Dual-track and Multi-track Schools

School authorities in Alberta and in other Canadian provinces have adopted two different models to offer French immersion to children of English-speaking parents who want them to learn Canada's other official language. These two models are (a) French immersion centres and (b) dual-track or multi-track schools. However, there is little research that compares French immersion centres to dual-track and multi-track schools in term of the effects they might have on their students. Olson and Burns (1981b) report that research on French immersion centres and on dual-track schools needs to be done. Unfortunately, much time has passed and this literature review indicates that the research recommended by Olson and Burns has not yet been conducted.

While little research appears to have been done in this area, one study (Lapkin et al., 1981) did compare the achievement in French language arts of students in immersion centres and immersion students in dual-track schools. This study included in its sample of immersion schools some schools that were technically dual-track schools, meaning that they had a small portion of their student population that was still enrolled

in an English program. Three of the five schools identified as immersion centres still had slightly less than 20% of their student population enrolled in an English program. Furthermore, the results provided in this study cannot be separated. It appears that little is known about the difference in achievement in the core subjects taught in French between the students enrolled in 100% French immersion centres and the students enrolled in French immersion programs in dual-track and multi-track schools.

Advantages and Drawbacks of Immersion Centres

When comparing immersion centres and dual-track and multi-track schools, the literature did not identify a single drawback for immersion centres. Lapkin et al. (1981) find that the English language skills of students in immersion centres are similar to those of immersion students in dual-track schools. Moreover, immersion centres appear to have advantages over dual-track and multi-track schools.

McGillivray (1979, 1983) writes that there are administrative advantages to having immersion centres. He explains that the staff, the programs and the resources are all devoted to immersion, which make the programming and the budgeting of the school more manageable. McGillivray (1983) mentions that immersion centres often have specialists offering remedial services, which seem to explain why their drop-out rates tend to be lower than the drop-out rates in dual-track schools.

Immersion centres seem to have educational benefits for students (Lapkin et al, 1981). It was found that, compared to immersion students in dual-track schools, students in immersion centres (a) tend to use more French outside of the classroom, (b) are more exposed to French material displayed around the school, (c) tend to have more adequate and suitable learning materials for each subject, and (d) have a greater

percentage of their school events (announcement, assemblies, sports days) done in French. Like Lapkin et al., Olson and Burns (1981b) have discovered that students in immersion centres tended to use French more outside of their classroom. Lapkin et al. have also found that students in immersion centres achieved better results in oral comprehension (Test de compréhension auditive) and in written comprehension (Test de compréhension de l'écrit) tests.

Advantages and Drawbacks of Dual-Track and Multi-Track Schools

Olson and Burns (1981b) found out that the parents of immersion students prefered dual-track schools over immersion centres. Most of the parents surveyed mentioned that French immersion programs were capable of achieving the goal of bringing the two language groups (French and English) together. Furthermore the junior high immersion students surveyed by Olson and Burns believed that French immersion programs help in bringing together the French and English culture. The vast majority of these students were enrolled in dual-track schools. Olson and Burns' findings show that dual-track schools offer a setting where two founding cultures of Canada can interact and bilingualism can be achieved.

An important role of a school administrator is being an educational leader (Krug, 1992; Larsen, 1987; Osborne, 1987). Many writers have brought up the fact that, in dual-track and multi-track schools, administrators are often unilingual, meaning that they only speak and understand English (Dagenais, 1990; Guttman, 1983; Lamarre, 1989; Safty, 1992a, 1992b; Tanguay, 1983). Furthermore, Day and Shapson (1996) report in their pan-Canadian survey that over half of the immersion teachers they surveyed did not have a bilingual or French-speaking administrator.

Many drawbacks arise from the fact that dual-track and multi-track schools have unilingual administrators. Bourassa-Tremblay (1992) reports that teachers in dual-track schools have problems communicating about educational issues related to their students with their administrators. Dagenais (1990) states that unilingual principals often lack pedagogical knowledge related to second-language learning. Numerous writers have stated that unilingual administrators have problems supervising and evaluating on their own the work of their immersion teachers (Day, 1992; Guttman, 1983; Lamarre, 1989; McGillivray, 1979; Safty 1992a, 1992b).

It also appears that it is difficult for English-speaking administrators to select and hire teachers with good French-speaking skills (Guttman, 1983), to assist in the curriculum development of their school (Safty, 1992b), and to coordinate the purchasing of French instructional material (Guttman, 1983). The ability to read and understand French appears to be very important when making crucial instructional decisions like the selection of teaching materials, the hiring of new teachers, and the evaluation of teachers seeking permanent employment. Furthermore, Fraser Child (1998) states that unilingual administrators are not living examples to the students in their schoosl of the importance of learning French.

Dual-track and multi-track schools have teachers under the same roof who come from different cultures, and this diversity tends to lead to tensions. In certain cases, the tensions arise from the fact that English-speaking teachers feel that they might lose their jobs because the student enrolment in their program is shrinking (Cleghorn, 1981; Day, 1992; Lamarre, 1989; Lapkin, 1984a). English-speaking teachers also feel that the weaker students from French immersion are transferred to the English program and

therefore they have more children with problems (Day, 1992). The allocation of resources between the different programs is another source of conflict (Lamarre, 1994; Olson & Burns, 1981a; Olson & Burns, 1983). Fraser Child (1998) relates that some English teachers find that French is too visible in their schools while the French teachers feel the opposite is true. The language spoken in the staff room is another sensitive issue. To avoid conflicts, administrators often forbid teachers to speak French in the staff room (Day, 1992). Some dual-track and multi-track schools in Alberta seem to adopt a similar unwritten policy regarding the use of French (Lamarre, 1989, 1994; Lemire, 1989).

Tests Scores: Tools Commonly Used to Measure Student Achievement

Standardized achievement tests are useful tools that provide evidence about students' mastery of knowledge and skills in the tested subjects (Bauer, 1999). Even parents believe that standardized tests are useful to identify students who need extra help and to raise student achievement (Gandal & Vranek, 2001). The Canadian Test of Basic Skills (CTBS), which includes three sub-tests (Vocabulary, Reading Comprehension and Mathematics Computations), has been used in several studies (Crawford, 1984; Lapkin et al., 1981; Ministère de l'Éducation du Manitoba, 1983). Other standardized tests like the Metropolitan Achievement Test (MAT) and the Stanford tests have also been used (Lapkin et al., 1981; Ministère de l'Éducation du Manitoba, 1983; Wahlstrom & Danley, 1976).

French standardized tests similar to the Canadian Test of Basic Skills that could be used throughout the country have not been developed. The studies that were done rely on French standardized tests that have been either developed by provincial agencies

(Alberta Education, 1990; Day et al., 1988; Manitoba Education and Training, 1993), by researchers from educational institutions (Lapkin & Swain, 1984) or by large francophone school authorities from Quebec (Crawford, 1984; Lapkin, 1984b; Ministère de l'Éducation du Manitoba, 1983).

From the approaches to measurement suggested by Gall, Borg and Gall (1996), it appears that achievement tests are the tools to use when a researcher looks at a large sample of students to determine their performance. Since this research project will deal with the entire grade 6 French immersion population in Alberta, it seems fitting to use standardized test scores to gather evidence about student achievement.

Even though standardized tests have been problematized for cultural bias, this research compares two sub-groups of a relatively homogenized immersion population. Students enrolled in immersion programs, regardless of the mode of delivery used by the school they attend, tend to come from the same demographics and cultural backgrounds. Immersion programs from their beginnings have attracted English-speaking parents coming from a middle class background (Olson & Burns, 1981b). In the case of this study, cultural bias is not a concern because it looks at the results of two groups that are culturally very similar.

Exemplary Practices Promoted by Principals That Appear to Affect Student Achievement

Researchers appear divided on the impact principals have on student achievement. Some researchers who have studied secondary principals have come to the conclusion that the principal's leadership does not have a significant impact on student achievement (Jones, 1987; Jones, 1988). Jones (1988) mentions that high schools are

complex organizations where a wider array of goals exist and therefore making difficult the establishment and the preservation of a clear mission. Jones (1987) reveals that secondary school principals do not impact student achievement because their work is varied and full of brief encounters. Moreover, their work does not allow them to spend much time on activities related directly to curriculum and instruction. However, as it will be demonstrated in the following section, other researchers have found that, through certain decisions they make, principals have an impact on student achievement.

A. Principals Create School Climates Fostering Student Achievement

Numerous studies show that the principals' actions and leadership style have indirect effects on student achievement (Andrews & Soder, 1987; Bista & Glasman, 1998; Glidden, 1999; Heck, 1990, 1993; Heck & Marcoulides, 1990; Pavan & Reid, 1994; Schmitt, 1990). As the literature on effective schools points out, principals use their role to create conditions that support the achievement of their students (Khan, 1995). Glidden shows that principals of high-achieving schools created school climates that (a) foster high expectations for all students, (b) put emphasis on high levels of involvement by teachers at all stages of planning, organization and development of staff accountability, (c) have an atmosphere that is both businesslike and accepting of all students and community members. Pavan and Reid indicate that the building of a school culture was being done by the principals of schools where students' academic achievement was higher than expected.

Heck and Marcoulides (1990) mention that school climate and the school instructional organization are two conditions influenced by principals that effect student achievement. Similarly, Heck (1993) shows that principals have a positive effect on

student achievement when they strongly influence (a) the way school is governed, (b) the activities used to develop and maintain the school's culture, and (c) the way that the school is organized instructionally. The reorganisation of the instructional schedule to allow more time to the core subjects and the extension of the school day to offer tutoring are other measures implemented by principals to improve student achievement (Bushman, Goodman, Brown-Welty, & Dorn, 2001; Cawelti, 2000; George, 2001).

B. The Allocation of Resources by Principals Impacts Student Achievement

Researchers have determined that principals who carefully allocate resources can have an impact on student achievement (Bamburg & Andrews, 1990; Gullatt & Lofton, 1996; Heck & Marcoulides, 1990; Pavan & Reid, 1994). Bamburg and Andrews discovered that teachers in high achieving schools felt that their principals were providing them with the resources they needed to teach effectively. Pavan and Reid mention that principals who find creative ways to allocate resources to meet students' needs help them achieve better academic results

Principals also have an impact on student achievement when they help purchase quality instructional materials to support student learning (George, 2001; Gullatt & Lofton, 1996; Lemire, 1989; Olson & Burns, 1981a). George indicates that the selection of instructional materials that supports high academic standards is one strategy used by school leaders to support students' learning.

C. Norms, Policies, Goals, and Vision of the School Promoted by Principal Affect Achievement

Principals do or at least ought to create norms and policies, provide a clear vision, and establish goals and purposes that allow students to focus on achievement

(Bamburg & Andrews, 1990; Brewer, 1993; Cheng, 1994; Eberts & Stone, 1988; Fullan, 1992; George, 2001; Glasman, 1993; Gullatt & Lofton, 1996; Hallinger, Bickman, & Davis, 1996; Hallinger & Heck, 1998; Heck & Marcoulides, 1990; Krajewski & Sabir, 2000; Leitner, 1994; Scheurich, 1998; Williamson, 1995). Eberts and Stone report that principals who (a) establish consensus on objectives and methods of instruction among their teachers, (b) maintain discipline in the school, and (c) help resolve personal conflicts have a significant influence on student achievement. Heck and Marcoulides discovered that higher student achievement is found in schools where principals develop school goals that are modeled on district curriculum and policies. Leitner and Cheng point out that, when principals influence what teachers focus on by ensuring that the school's mission is clear, they indirectly impact student learning and performance. Fullan indicates that principals who concentrate on building collaborative cultures with teachers do more lasting good for schools than charging forcefully in with agendas for change. Scheurich mentions that high academic success is achieved in schools with low-SES (Socio-Economic Status) students when the principals and the teachers adopt five core beliefs. These core beliefs are: (a) "all students can succeed at high academic levels – no exception allowed" (p. 460), (b) the school must be "child – or learner – centered" (p. 461), (c) "all children must be treated with love, appreciation, care, and respect – no exception allowed" (p. 462), (d) the "racial culture, including first language of the child is always highly valued – no exception allowed" (p. 464), and (e) "the school exists for and serves the community – there is little separation" (p. 465) between both.

D. Hiring and Supervising Quality Teachers Have an Impact on Student Achievement

Principals play a role in the quality of the instruction received by the students in their schools when they hire qualified teachers (Bell, 2001; Brewer, 1993; Donmoyer & Wagstaff, 1990; Kaplan & Owings, 2001; McGillivray, 1979; Reeves, 1998, Tanguay, 1983; Zigarelli, 1996) and when they skillfully supervise their teachers (Bamburg & Andrews, 1990; Gullatt & Lofton, 1996; Heck & Marcoulides, 1990; Pavan & Reid, 1994). Bell indicates that, in high-performing, high poverty schools, principals had the flexibility to hire staff that was needed to create an environment conducive to learning. Brewer mentions that principals who have academically oriented goals are likely to have the most impact on student achievement when they hire new teachers who share their goals. Heck and Marcoulides state that principals who have more frequent direct contact with teachers through clinical supervision can prescribe changes in instructional strategies that can lead to higher student achievement. Bamburg and Andrews found out that principals of high achieving schools evaluate the performance of their teachers so they are left with tools and ideas to improve their teaching.

Researchers have also pointed out that principals who properly identify the in-service needs of their teachers (George, 2001; Gullatt & Lofton, 1996; Reeves, 1998), participate in staff development activities (Bamburg & Andrews, 1990), evaluate learning outcomes, and use assessment results to improve instruction (Gullatt & Lofton, 1996; Heck & Marcoulides, 1990) have a positive impact on student achievement. Principals of high achieving schools look at the academic results of their students and initiate new programs that target the instructional needs of their students (Berman, Cross, & Evans, 2000; Bushman et al., 2001; Cawelti, 2000; George, 2001).

E. Principals Involving Parents in Their Children's Learning Experiences

Principals who successfully involve parents in the learning experiences of their children and in the life of the school have seen an increase in the academic achievement of their students (Bell, 2001; Cawelti, 2000; Gullatt & Lofton, 1996; Krajewski & Sabir, 2000; Scheurich, 1998; Williamson, 1995). Bell mentions that principals explain that the success of their students is partly due to the strong, lasting ties developed between the school and the parents and community. Scheurich indicates that, when a school is providing assistance to parents and to the community, a high performance learning community is created, the school experience itself is closely tied to the community, and the community feels related to the students and the goals of the school. Williamson states that principals of high achieving schools establish liaisons with family and community agencies to ensure that students have support and encouragement for the school's academic mission.

F. The Role French Immersion Principals Play in Relation to Student Achievement

The impact of principals on the achievement of their French immersion students is a topic of research that needs to be explored. Principals help create school cultures. School cultures value effective practices. Effective school practices should correlate with increased student achievement.

Summary

When immersion programs first started, researchers discovered that the learning of French did not have a negative impact on the learning of English. As the immersion programs grew in popularity, different models of instruction delivery developed: immersion centres and dual-track or multi-track schools. When comparing the two

models, the literature provides a theoretical basis that points out advantages and drawbacks of each of them. The literature also provides a theoretical basis that offers exemplary practices that might explain differences in achievement between the students in immersion centres and the students in dual-track or multi-track schools. In addition, the literature presents evidence that results from standardized tests are valid and are commonly used to look at student achievement.

CHAPTER 3

METHOD OF THE STUDY

Introduction

The purpose of this study was twofold. First, the study investigates the possible existence of achievement differences on grade 6 provincial achievement tests between French immersion students enrolled in immersion centres and French immersion students enrolled in dual-track or multi-track schools. Second, it enquires why students in certain French immersion schools achieved results that exceeded the overall results of students on the four provincial achievement tests written in French (French language arts, mathematics, science, and social studies). This chapter outlines the method applied to attend to the research questions presented in Chapter 1 and explains the quantitative and qualitative approaches that were used. The selected participants are described, and the procedures followed for data collection and analysis are provided. Threats to the validity and trustworthiness of the information and data assembled are addressed, and attention is paid to the particular ethical considerations of this study.

Design

Overview of the Design

The design of this study draws on both quantitative and qualitative methodologies to establish a broad database in order to develop a better knowledge and understanding of the findings associated with the research questions (Gall, Borg, & Gall, 1996; Glesne, 1998; Smith, 1983). Miles and Huberman (1994) believe that an approach that uses both quantitative and qualitative data is "needed if we are to understand the world" (p. 40). Gall, Borg and Gall (1996) write that:

> Some researchers believe that qualitative research is best used to discover themes and relationships at the case level, while quantitative research is best used to validate those themes and relationships in samples and populations. In this view, qualitative research plays a discovery role, while quantitative research plays a confirmatory role. (p. 9)

A possible positive outcome of this design is the combination of the advantages of the quantitative and qualitative methodologies (Creswell, 1994; Miles & Huberman, 1994; Goodwin & Goodwin, 1996; Smith & Heshusius, 1986).

In this research, the quantitative data will serve to determine if the students enrolled in immersion centres are achieving higher scores on achievement tests than students in dual-track or multi-track schools. Quantitative data will also be used to find out in which of the four core subjects one of the two immersion populations is outperforming the other. Another role of the quantitative data is to identify the schools where students are achieving the best results.

Moreover, the quantitative data act as a supportive element of the qualitative methodology (unstructured interviews) of this research. Fontana and Frey (2000) write that one of the basic elements of unstructured interviewing is locating an informant. Denzin and Lincoln (2000) report that "many qualitative researchers in the postpositivist tradition will use statistical measures, methods, and documents as a way of locating groups of subjects within larger populations" (p. 9). The identification of the top achieving schools allows the researcher to locate the principals that would be

interviewed. Finally, the quantitative data helped the researcher formulate questions that were asked during the unstructured interviews, which are used to gather qualitative data.

The qualitative methodology, through the use of unstructured interviews, would gather data "to obtain a rich, in-depth experiential account of an event or episode in the life of the respondent" (Fontana & Frey, 2000, p. 646). In the case of this study, the various respondents related the reasons and the decisions explaining why their students performed very well on achievement tests. The principals interviewed are also asked to explain why one model of delivering French immersion is more successful than the other and why the difference between the two immersion populations is greater in certain subjects than others.

Quantitative Methodology

The Learner Assessment Branch of Alberta Learning provided two types of quantitative data that are knowledge sources: the results of all grade 6 students enrolled in French immersion schools in the province between the 1995-1996 and 1999-2000 school years and Multiyear report tables of scores on the four core subjects taught in French were created. In these tables, the results obtained by immersion students enrolled in immersion centres as well as the results of students enrolled in dual-track or multi-track schools were grouped separately to create two distinct French immersion populations. These tables were created to determine if one of the two immersion populations was achieving better results than the other in one, several, or all four subjects.

The tables present the actual number and the percentage of students from immersions centres as well as the actual number and the percentage of students from

dual-track or multi-track schools who (a) were absent and (b) were excused for each of the 5 school years studied. The number of students enrolled in the course and the number of students writing the tests are also provided in these tables. However, the key information displayed in the tables is the Total Test Mean, expressed in percentage, for each of the two immersion populations. The difference between the Total Test Mean of students in immersion centres and the Total Test Mean of students in dual-track and multi-track schools shows which immersion population is achieving better results on each test. The standard deviation, expressed in percentage, for each immersion population is also provided. These findings are used to generate some of the questions that are going to be asked to the principals of the schools that will be selected (see Appendix C, Interview Questions).

Second, the Learner Assessment Branch also provided past years' results in the four subjects for each of Alberta's French immersion schools that were offering grade 6 instruction. These school-by-school results were used to find the top six French immersion schools where students were achieved the best results on the grade 6 provincial achievement tests over the 5 years targeted in this study.

Individual school results provided by the Learner Assessment Branch permitted the identification of the schools that had the highest percentage of students who achieved the acceptable standard on the four tests. For each school year and for each subject, the researcher ranked the schools according to the percentage of their students achieving the acceptable standard. Schools that were ranked between the first and the third position received 4 points. Schools that were placed between the fourth and the sixth position received 3 points. Schools receiving 2 points were ranked between

seventh and ninth position. Finally, schools that placed between the tenth and twelfth position received 1 point. In case of a percentage tie, the percentage of students achieving the standard of excellence was used to determine which school had students who achieved better results. The researcher considers that the schools with the greatest amount of points had the students with the best overall results during the 5 years reviewed.

Qualitative Methodology

The qualitative portion of this study is based on the researcher's interpretations of data gathered from taped interviews with six current and former principals of five of the top six schools where the students achieved the best overall results in the four subjects taught in French. Fontana and Frey (2000) maintain that "interviewing is one of the most common and powerful ways in which we try to understand our fellow human being" (p. 645). Since one goal of this research was to understand more clearly the decisions of the principal that influence student achievement, it became apparent that the best way to accomplish it was to use interviews. Unstructured interviewing was chosen because it "can provide a greater breadth of data than the other types, given its quantitative nature" (Fontana & Frey, 2000, p. 652).

A key aspect of the qualitative research design is that the data collected is based on the respondents' personal perceptions and interpretations. Kidder (1981) writes that:

> The situation often arises in social research in which it is impossible or impractical to collect data about people by observation [and] in these situations interviews . . . are commonly used to gather information. Topical

> topics of interests are a person's knowledge, attitudes, beliefs, feelings, motivations, anticipations, future plans or past behavior. (p. 146)

The interview approach puts "heavy reliance on *verbal reports* . . . from the subject for information about stimuli or experiences to which they are exposed and for knowledge of their behavior" (Kidder, 1981, p. 146). Verbal reports pose a problem of reliability since they require from the subject awareness and an ability to recollect, organize and state personal knowledge. Fontana and Frey (2000) mention that a researcher "relies on the interview as a source of information, with the assumption that interviewing results in true and accurate pictures of respondents' selves and lives" (p. 646). To share this true picture, the subject must also be willing to share all the information without, consciously or unconsciously, withholding parts of it. Kidder states that:

> … people are sometimes, unwilling or unable to remember or to describe accurately what they know, what or how they feel, and what they do. . . To the extent that they can and will communicate their knowledge about themselves, they provide the investigator with information that could otherwise be obtained, if at all, only by other, even more fallible methods than self-reports. (p. 147)

To make sure that the interview results are as accurate as possible, it is essential to create an atmosphere in which the subjects feel comfortable to express beliefs, behaviours, and past decisions that they may not have liked or that they did not want to share at first.

The interview approach offers many insights into the participants' thought process by allowing for specific details of behaviours and beliefs to be identified. The

main concern with the interview was to reflect accurately in the researcher's conclusions what the participants said. Kidder (1981) cautions that "the subject's reports may or may not be taken at face value: they may be interpreted in the light of other knowledge about the person . . . or inferences may be drawn about aspects of the subject's functioning that they have not reported" (p. 146). Kidder goes on to say that "regardless of the amount and kind of interpretation . . . the starting point is the subjects' self report" (p. 146). For this purpose, the interviews were taped and transcribed to allow the participants to verify the content of the transcripts.

Although limits to the interviews' validity exist, it still remains a method of data gathering that has been used effectively in the area of educational research (Guba & Lincoln, 1985). By keeping in mind these possible drawbacks and allowing for the sensitivity of the interview process, the interviews should generate valuable data.

Data Collection

Selection of Participants

Upon the identification of the top six schools where the grade 6 students achieved the best results on provincial tests written in French, the researcher directly contacted by phone the principals of the top six schools. E-mail messages were also sent to confirm interview dates and time and were used to answer any question raised by the participants. In the case of one school located in a large urban district, permission to interview the two former principals was officially granted.

In order to be selected, the principals must have been at the selected school for at least two of the years from which the results were collected. In the event that the administrator had only been at the school for one year, the former administrator who

was at the school during the years that were part of the study would have to be tracked down and interviewed. This situation occurred at two of the schools that were identified.

For one school, two principals were interviewed because they served as administrators one after the other in the school during the five-year span from which the students' results were taken. The principal of one school declined to participate because she felt her French immersion school was too different from the other schools to be included in this study. She believed that her school goals focused highly on academic success. She added that parents supported these goals and that many of them who used to live outside of the school boundaries had moved to make sure that their children could attend her school.

The administrators were from four school jurisdictions and their administrative experience ranged from three to over fifteen years, with two having more than ten years experience as an administrator of a school with a French immersion program. Four respondents were male and two were female. The participants ranged in age from the late thirties to the mid fifties.

Interviews

The interviews were semi-structured. The set of questions served as a base for the interviews; but at any point, the researcher or the participants were able to explore other avenues related to the research questions stated in Chapter 1. The semi-structured questions were sent via e-mail to each participant. Open-ended questions were used because they help to avoid directing, controlling or narrowing information participants might want to share, while ensuring all areas of the research questions were covered

with the guidance of a list of questions. Kidder (1981) believes that a less structured interview

> ... if properly used, helps to bring out the affective and value-laden aspects of respondents' responses and to determine the personal significance of their attitudes. Not only does it permit the subject's definition of the interviewing situation to receive full and detailed expression; it should also elicit the personal and social context of beliefs and feelings. (p. 187)

The interviews were conducted in a way to ensure that the participants' answers were both valid and reliable. The interviews took place in late Spring 2001. In all but one case, the interviews took place at the participant's current school, in a comfortable setting that encouraged the respondents to share their experiences. One interview was conducted after work hours in a small conference room at the researcher's workplace because the principal had retired at the end of the previous school year. All interviews were conducted in English because the principals either spoke English only or felt more comfortable expressing their ideas in English.

All interviews were tape-recorded. This method enabled the researcher to observe the reactions and the body language of the participant, to be an active listener, to ask specific questions, to explore new issues, and to interact with the respondents throughout the interview. The taped data ranged from 40 minutes to 80 minutes per interview. Usually, the participants chatted informally with the researcher about their work for an additional ten to thirty minutes. In one instance, the administrator gave me a tour of the school and commented on several aspects of it. Shortly after leaving this

particular school, the researcher jotted down additional notes. An outside party transcribed the tapes and the researcher reviewed the transcripts to ensure that the taped interviews were accurately transcribed.

Data Analysis

Interpretational analysis is a method used to look at the transcripts and to find answers to the specific research questions. Interpretational analysis is defined as "the process of examining case study data closely in order to find constructs, themes, and patterns that can be used to describe and explain the phenomenon being studied" (Gall, Borg, & Gall, 1996, p. 562).

Data Trustworthiness

To ensure trustworthiness of the data analysis, methods were used that would justify credibility, transferability, dependability and confirmability as explained by Guba and Lincoln (1985).

Credibility

In terms of credibility, during the interviews I used opportunities to paraphrase and probe for understanding and confirmation. The findings were also discussed with others who have extensive knowledge of French immersion.

Transferability

To ensure transferability, principals offered detailed descriptions of their school, staff and student bodies as well as their school community. They provided the researcher with vivid examples of their experiences as administrators in the five French immersion schools. Throughout the reporting and analysis, numerous direct quotes from

the participants were used in an attempt to support findings, reduce any unintentional bias and ensure transferability.

Dependability

To ensure dependability, I have supplied an "audit trail". I have kept a logbook in which I discussed my analysis of the data.

Confirmability

The keeping of the logbook allowed the researcher to reflect on how appropriate the kinds of data collected were.

The two main methods used to ensure trustworthiness of the study were member checks and the keeping of the logbook. All interviews were taped and transcribed for the purposes of member checks, recall and audit trail. The original transcripts were checked for accuracy of information. The principals were given the opportunity to review copies of the transcriptions so they could add, delete or clarify parts of the transcripts. They were also encouraged to give any additional feedback to the researcher. The logbook took the form of a journal in which I recorded experiences, ideas, concerns, and personal reflections. Guba and Lincoln (1985) explain that the writer should develop and audit trail because it "is a major trustworthiness technique [that] depends on the keeping of records in such a way . . . that an auditor can later connect assertions in the report with the raw data on which they are presumably based" (p. 366).

Ethical Considerations

The nature and purpose of the study were verbally explained to potential participants. They were asked to sign a letter of informed consent representing what is

expected of them for participation in the study. A copy of the consent form is shown in the appendices (see Appendix A, Participant Consent Form). All participants were involved on a strictly voluntary basis with the right to withdraw from the study at any point. The information assembled during the study was used only with the consent of the participant and the researcher's assurance of greatest confidentiality. The names of school jurisdictions, schools, principals, teachers and other information that could lead to the identification of the participants by the readers were deleted or replaced by pseudonyms. All principals and schools were given pseudonyms. A research proposal of this study was presented to and subsequently sanctioned by an ethics review committee in the Department of Educational Policy Studies. The intent was to guarantee that the research would meet the standards of the University of Alberta's guidelines for research involving human subjects.

CHAPTER 4

ANALYSIS OF THE QUANTITATIVE DATA

Introduction

This chapter is divided into five major sections. First, a description of the grade 6 provincial achievement tests is given. Second, the two types of quantitative data used in the study are reported. This is followed by an explanation of how tables were created to organize one type of quantitative data. Next, the quantitative data is analyzed. Finally, an interpretation of the results is provided.

Description of the Grade 6 Provincial Achievement Tests

The grade 6 French language arts achievement test has two parts. The first is a written component, called Part A – Writing, that asks students to create two writing assignments. Each year in July, during a provincial marking session, teachers who receive specific marker training score these assignments. They are scored out of a possible 55 marks using a scoring guide and exemplars that illustrate the provincial standards. The mark received by a student on the Part A – Writing component of the French language arts test is worth 50% of the Total Test. The other 50% of the Total Test comes from the student's result on the Part B – Reading component of the French language arts test. If a student was absent for either Part A or Part B of the test, he or she would be included in the table in the row labeled Absent for the test and would not be included in the Total Test Mean (%) that is calculated for the whole population. Since each component is worth 50% of the total test score and since they are administered on two different days, the percentage of students absent from the French language arts test is higher than the percentage of students absent in the other tests.

The Part A – Writing component is completed by students in May, the week following the Victoria Day holidays. The French language arts Part B – Reading test includes 8 or 9 texts of various types (poems, cartoons, short stories, etc.). Depending on the length of each text, students have to answer between 4 and 7 questions. This part is administered during the second or third weeks of June.

The grade 6 mathematics achievement test also has two parts. The first part is a multiple-choice test called Part A – Operations and Number Sense. This test has 30 questions divided into 4 categories: Addition and Subtraction (7 questions), Multiplication and Division (7 questions), Number relationship (8 questions), and Connecting Experience (8 questions). These questions ask students to do straightforward computations. Depending on their results, the students receive 1 mark or zero for each category. This adds up to a maximum of 4 marks. This mark out of a possible 4 will then be added to the mark they will receive for the second part. The Part A – Operations and Number Sense component of the mathematics test is written in May, the week following the Victoria Day holidays. The second component, called Mathematics Part B – Multiple Choice, consists of 50 problem solving questions. This second part is administered during the second or third week of June. For mathematics, the maximum mark a student could receive is 54. If a student if absent only for Part A – Operations and Number Sense of the test, he or she would have his or her mark on Part B of the test prorated and a final mark expressed as a percentage would be calculated. If a student was absent only for the Part B of the test, he or she would be included in the table in the row labeled Absent for the test and would not be included in the Total Test Mean (%) that is calculated for the whole population.

The grade 6 social studies and science achievement tests, like the second components of French language arts and mathematics, are comprised of 50 multiple-choice questions. The multiple-choice questions in all the tests offer 4 alternatives from which to choose. The social studies and science achievement tests are written during the second or third week of June. For social studies and science, as well as the other subjects, the students' results on their multiple-choice tests are transformed into percentage. Then, the Total Test Mean is calculated for the whole population.

For all of the tests, the multiple-choice questions and written assignments are created by groups of grade 6 French immersion and Francophone teachers, field tested in grade 6 French immersion classrooms, and validated by grade 6 French immersion teachers. These questions have to be closely related to outcomes of these four grade 6 programs of studies that are being taught in the province of Alberta.

The multiple-choice questions for science, social studies and mathematics are first developed and field-tested in English. Approximately 160 questions are field-tested in each of these subjects each year. About 40 of these questions are translated by a professional translator into French for field-testing in immersion and Francophone classes. Questions are usually field-tested one or two years prior to being selected for use in an achievement test.

Once the English version of a mathematics, science, or social studies achievement test is put together, a professional translator translates the questions to create the French version of the achievement test. It is likely that a few of the questions selected in the English version were some of the 40 questions translated for the French

field test. These already translated questions are simply incorporated in the French version of the achievement test.

When an achievement test has been translated, the final step is to bring together a group of three teachers, including two French immersion teachers and a teacher from a Francophone school to verify and validate the quality of the French translation. Due to the fact that there are more dual-track and multi-track schools than immersion centres, the immersion teachers nominated by their superintendents to participate in this process mostly come from dual-track and multi-track schools. When available, one teacher from an immersion center is part of this process; but in most cases both immersion teachers are from dual-track or multi-track schools. The translator works with the group of three teachers to ensure that (a) the words used are appropriate for the subject tested and understood by the students at the grade 6 level, (b) the grammar and spelling are accurate, and (c) that the French translation does not present a harder challenge for the French-speaking students than the English version present for the English-speaking students.

Types of Quantitative Data Used

Two types of quantitative data were used in this study: Tables of results of all grade 6 immersion students on provincial achievement tests and individual school results. The tables included in this study were created using the results of all the grade 6 students enrolled in French immersion on the Provincial Achievement Tests for the 1995-1996, 1996-1997, 1997-1998, 1998-1999, and 1999-2000 school years. They include the results for the following core subjects written in French: French language arts, mathematics, science, and social studies (see Table 1 to Table 4).

It is important to note that, since science results in 1995-1996 and 1996-1997 did not include all of the French immersion students due to the implementation of a new curriculum, this research will not include an analysis of the data for these 2 years in science (see Table 3).

Individual school results provided by the Learner Assessment Branch were used to find the schools with the greatest percentage of their students achieving the provincial standard of excellence and the greatest percentage of their students achieving the provincial acceptable standard. However, they are not included in this study due to the large amount of data that they constitute and due to the fact that their inclusion could lead to the identification of the top achieving schools that are part of this study.

How the Tables Were Created

The tables produced yearly for each subject tested by the Learner Assessment Branch of Alberta Learning present the provincial results of French immersion students as one aggregated group. For the purpose of this study, all of the French immersion students were divided into two different populations according to the type of French immersion school they attended: an immersion centre population and a dual-track and multi-track school population.

Using the school codes of each school offering a French immersion program, a list of immersion centres and a list of dual-track or multi-track schools were created. Using these two lists, the French immersion provincial results (of the 5 years included in this study) were disaggregated and reorganized to show side by side the results of all French immersion students enrolled in immersion centres (Immersion) and the results of all French immersion students attending dual and multi-track schools (Dual). Using the

same program they have to generate the provincial results, assessment resource officers (ARO) of Alberta Learning created these new tables.

The tables that were produced for each of the subjects show, for the 5 years chosen for this project, the results of the two immersion populations that were described above. Instead of comparing school data to provincial data or school authorities data to provincial data (as it is done on the regular tables produced to report student results to the various stakeholders, i.e. schools and school authorities), these tables compare results of students from immersion centres to results of French immersion students from dual-track and multi-track schools.

These newly created tables present the student results using three out of the six sets of data that are part of the regular Multiyear report tables generated to display the provincial results. These three sets of data are: Participation, Total Test Mean (%), and Total Test S.D. (%). Furthermore, the Participation data is subdivided into four components: Enrolled, Writing, Absent and Excused. These components show, for each of the two immersion populations, the actual number (column labeled N) and the percentage of students (column labeled %) that are (a) enrolled, (b) writing, (c) absent, and (d) excused from the test. The Total Test Mean (%) is the raw score, expressed in percentage, achieved by each of the two French immersion populations in the subject tested. The row labeled Total Test S.D. (%) is the standard deviation that shows the average amount of difference, expressed in percentage, between individuals' scores and the Total Test Mean (%).

To facilitate the analysis of the results, the researcher added a row of data to these tables. This row is called Dif Total Test Mean (%). The numbers in this row show

the difference, expressed in percentage, between the Total Test Mean (%) of the students in immersion centres (Immersion) and the Total Test Mean (%) of immersion students in dual-track and multi-track schools (Dual). When the difference in Total Test Mean favours students in immersion centres, the number is placed in the column that displays results of immersion centres (Immersion). When the difference in Total Test Mean favours immersion students in dual-track and multi-track schools, the number is placed in the column that displays results of dual-track and multi-track schools (Dual) (see Table 1 to Table 4).

Analysis of the Quantitative Data

Significance of the Quantitative Data

Since these tables present the results of all French immersion students divided into two populations, the comparison between the results presented was more straightforward than if the tables were presenting results of a sample of students from each of the two populations. The results were not representing only samples of the two populations that had to be generalized back to the whole populations. Regression analysis was not warranted in this study because the results came from the entire French immersion population divided into two sub-populations.

Furthermore, since the research looked at the results of the entire immersion population divided into two sub-populations, this meant that, if any difference in the Total Test Mean between the two immersion populations existed, then it would signify that they had differences in achievement on the various tests. The results presented in Table 1 to Table 4 clearly indicate that Total Test Means are higher for immersion center students, therefore it can be construed that the immersion center population had

performed better on the various achievement tests written in French during the years covered in this study.

The analysis of the results presented in the tables shows that the number of students excused over the years in the four subjects is fairly similar between the two immersion sub-populations. According to the Achievement Test Administration – Policy (Alberta Learning, 2001), "a superintendent may, on an individual basis, excuse a student from writing an achievement test for the following reasons:

- the student is not capable of responding to the assessment in its original or approved modified form
- participation would be harmful to the student". (Policies, p. 1)

In both sub-populations, the students who wrote the achievement tests were judged by their school authorities to be capable of completing the tests.

The next step was to compare mathematically the Total Test Mean in each subject for the two French immersion populations by subtracting the results of students in immersion centres from the results of students in dual-track and multi-track schools to see if there was a difference between the two Total Test Means.

Table 1

Achievement Test Multi-Year Report
Grade 6, 1996 - 2000
Grade 6 French Language Arts

Results for Students in Dual/Multi-Track Schools (Dual) and Students in French Immersion Centres (Imm)

French Language Arts

Participation	School Year															
	1995 – 1996				1996 – 1997				1997 – 1998				1998 – 1999				1999 – 2000			
	Dual		Immersion		Dual		Immersion		Dual		Immersion		Dual		Immersion		Dual		Immersion	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Enrolled[a]	1611	100.0	694	100.0	1461	100.0	706	100.0	1425	100.0	617	100.0	1412	100.0	661	100.0	1417	100.0	701	100.0
Writing	1587	98.5	688	99.1	1432	98.0	684	96.9	1388	97.4	597	96.8	1309	92.7	654	99.0	1340	94.6	695	99.1
Absent[b]	24	1.5	6	.9	26	1.8	21	3.0	33	2.3	20	3.2	67	4.7	5	0.8	70	4.9	5	.7
Excused	0	.0	0	.0	3	.2	1	.1	4	.3	0	.0	36	2.6	1	.2	7	.5	1	.1
Total Test Mean (%)	64.8		66.9		67.2		66.0		64.7		65.7		65.2		66.7		64.8		66.6	
Total Test S. D. (%)	12.7		12.3		12.5		12.7		13.8		13.2		13.1		12.5		12.6		11.8	
Dif Total Test Mean (%)			2.1		1.2						1.0				1.5				1.8	

[a] Includes all students registered in Grade 6 and ungraded students in year 6 of schooling.

[b] Includes students who were absent for the entire test or for part of the test, and those who wrote but whose results were withheld.

Table 2

Achievement Test Multi-Year Report
Grade 6, 1996 - 2000
Grade 6 Mathematics (Written in French)

Results for Students in Dual/Multi-Track Schools (Dual) and Students in French Immersion Centres (Imm)

Mathematics

Participation	School Year															
	1995 – 1996				1996 – 1997				1997 – 1998				1998 – 1999				1999 – 2000			
	Dual		Immersion		Dual		Immersion		Dual		Immersion		Dual		Immersion		Dual		Immersion	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Enrolled[a]	1623	100.0	692	100.0	1452	100.0	705	100.0	1424	100.0	618	100.0	1381	100.0	659	100.0	1371	100.0	700	100.0
Writing	1609	99.1	692	100.0	1433	98.7	699	99.1	1408	98.9	609	98.5	1323	95.8	655	99.4	1361	99.3	697	99.6
Absent[b]	14	.9	0	.0	17	1.2	5	.7	13	.9	9	1.5	57	4.1	4	.6	6	.4	1	.1
Excused	0	.0	0	.0	2	.1	1	.1	3	.2	0	.0	1	.1	0	.0	4	.3	2	.3
Total Test Mean (%)	74.9		77.3		74.2		74.4		73.4		75.0		73.5		75.3		71.4		74.4	
Total Test S. D. (%)	15.6		14.0		15.0		15.2		15.5		14.3		16.5		15.9		16.4		15.3	
Dif Total Test Mean (%)			2.4				.2				1.6				1.8				3.0	

[a] Includes all students registered in Grade 6 and ungraded students in year 6 of schooling.

[b] Includes students who were absent for the entire test or for part of the test, and those who wrote but whose results were withheld.

Table 3

Achievement Test Multi-Year Report
Grade 6, 1998 - 2000
Grade 6 Science (Written in French)

Results for Students in Dual/Multi-Track Schools (Dual) and Students in French Immersion Centres (Imm)

Science

Participation	School Year											
	1997 - 1998				1998 - 1999				1999 - 2000			
	Dual		Immersion		Dual		Immersion		Dual		Immersion	
	N	%	N	%	N	%	N	%	N	%	N	%
Enrolled[a]	1406	100.0	611	100.0	1384	100.0	658	100.0	1366	100.0	698	100.0
Writing	1381	98.2	598	97.9	1326	95.8	657	99.8	1355	99.2	691	99.0
Absent[b]	22	1.6	12	2.0	55	4.0	1	.2	7	.5	5	.7
Excused	3	.2	1	.2	3	.2	0	.0	4	.3	2	.3
Total Test Mean (%)	65.9		66.5		64.1		65.6		67.9		71.1	
Total Test S. D. (%)	16.1		14.9		17.6		16.7		17.1		14.9	
Dif Total Test Mean (%)			.6				1.5				3.2	

[a] Includes all students registered in Grade 6 and ungraded students in year 6 of schooling.

[b] Includes students who were absent for the entire test or for part of the test, and those who wrote but whose results were withheld.

Table 4

Achievement Test Multi-Year Report
Grade 6, 1996 - 2000
Grade 6 Social Studies (Written in French)

Results for Students in Dual/Multi-Track Schools (Dual) and Students in French Immersion Centres (Imm)

Social Studies

Participation	School Year															
	1995 – 1996				1996 – 1997				1997 – 1998				1998 – 1999				1999 – 2000			
	Dual		Immersion		Dual		Immersion		Dual		Immersion		Dual		Immersion		Dual		Immersion	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Enrolled[a]	1616	100.0	621	100.0	1458	100.0	686	100.0	1424	100.0	609	100.0	1383	100.0	658	100.0	1365	100.0	683	100.0
Writing	1604	99.3	619	99.7	1443	99.0	681	99.3	1410	99.0	599	98.4	1327	96.0	657	99.8	1360	99.6	681	99.7
Absent[b]	12	.7	2	.3	13	.9	4	.6	11	.8	8	1.3	54	3.9	1	.2	2	.1	0	.0
Excused	0	.0	0	.0	2	.1	1	.1	3	.2	1	.2	2	.1	0	.0	3	.2	2	.3
Total Test Mean (%)	60.1		62.4		64.5		65.2		65.9		67.3		66.9		69.7		65.7		68.7	
Total Test S. D. (%)	16.6		16.0		15.8		15.6		16.2		15.4		16.1		15.3		16.4		14.6	
Dif Total Test Mean (%)			2.3				.7				1.4				2.8				3.0	

[a] Includes all students registered in Grade 6 and ungraded students in year 6 of schooling.

[b] Includes students who were absent for the entire test or for part of the test, and those who wrote but whose results were withheld.

Interpretation of the results

The results of the calculations of difference between the Total Test Means showed that, for the four subjects tested in French (in the categories observed during the years used for this study), students enrolled in immersion centres were achieving better results in all of the subjects, for each of the years that were used for this study. Furthermore, the difference between the means of the two immersion populations have been steadily increasing in all of the subjects between the 1997-1998 school year and the 1999-2000 school year.

Only in the 1996-1997 school year was the mean of the dual-track and multi-track students on the French language arts test superior to the mean of students in immersion centres (see Table 1). In view of the trend that showed an increase in the difference between the results of the two populations (in favour of students in immersion centres) in every subject and because these results happened in the subject where the two immersion populations had the most similar results, the researcher decided to address this issue with the principals. The researcher felt that one of the questions asked during the interviews could possibly provide an answer as to why these results that are different from all the others happened in French language arts (see Appendix C, Interview Question 14).

The results displayed in Table 1 to Table 4 help answer part of the specific research problem as stated in Chapter 1. Students enrolled in French immersion centres have achieved better results on Alberta's provincial achievement tests, over the last 5 years, in the four core subjects taught in French (mathematics, science, social studies

and French language arts) than immersion students enrolled in dual-track or multi-track schools.

Some of the other research questions, as stated in Chapter 1, have been answered by the results presented in Table 1 to Table 4. For instance, French language arts is not the subject that has shown the greatest difference in achievement between the two French immersion populations over the 5 years of this study. Table 1 shows that compared with the results in the other three subjects (Table 2 to Table 4), French language arts is the subject that has the least difference in Total Test Mean results between the two immersion sub-populations. In Chapter 1, the researcher stated that he expected that French language arts to be the subject that would show the greatest difference in achievement between the two French immersion populations. Having taught for many years in an immersion centre, the researcher believed that the total French-speaking environment (inside and outside of the classroom) in an immersion centre would develop French language skills that would be clearly superior to French language skills developed in an environment where French was not spoken as often outside of the classroom. Furthermore, personal contacts and conversations with other French immersion teachers from dual-track and multi-track schools reinforced this belief. Most French immersion teachers with whom the researcher had spoken informally over the years, regardless in which type of school they taught, also thought that students in immersion centres would develop better French language skills than their dual-track and multi-track counterparts. Table 1 shows that the results for French language arts are not supporting this researcher's assumption.

A second research question (see Chapter 1) was answered with the help of the quantitative data. Achievement on provincial tests for one or more of the three remaining core subjects studied is not similar between the two French immersion populations. The results show a greater gap in achievement in the three other subjects (mathematics, science, and social studies) between the two immersion populations. The difference in Total Test Mean clearly shows that students enrolled in immersion centres are achieving better results than immersion students from dual-track and multi-track schools. Social studies is the subject where this difference has been the greatest over the 5 years explored in this study. In Chapter 1, the researcher believed that the achievement results in the other three core subjects studied would also show a gap between the two populations. The researcher based this hypothesis on his nine years as a grade 6 French immersion teacher in an immersion centre, on his work-related visits to French immersion classrooms throughout the province, and his conversations with dozens of immersion teachers. The results displayed in Table 1 to Table 4 sustain this particular assumption made by the researcher.

The other type of quantitative data used was the individual school results. Each school was ranked according to its students' results as explained in Chapter 3. This lead to the identification of the top 10 schools offering a French immersion program. Only the top six schools were used in this project; but the ranking of these top 10 schools helped to answer another research question identified in Chapter 1: Are there some high achieving French immersion schools that are using a model different than the one that is allowing its students to achieve the best results on Alberta's provincial achievement tests? Most of the high achieving schools are delivering the French immersion program

using the model different from the one that has allowed immersion students to achieve excellent results on provincial achievement tests. The researcher assumed that most of the high performing schools would have been using the model that allowed students to achieve the best results and that there would be a limited number schools using the other model in the top 10 schools. Once again, the researcher based his assumption on his years as a classroom teacher, his visits to numerous immersion classrooms, and his conversations with other immersion teachers. Out of the top 10 achieving schools identified, eight were dual-track schools and two were immersion centres. These findings demonstrate that this assumption was not accurate.

An explanation for this phenomenon might come from the standard deviations as presented in the row called Total Test S.D. (%) in Table 1 to Table 4. The standard deviation is consistently larger for the immersion students in dual-track and multi-track schools than the standard deviation for students in immersion centers. Immersion students in dual-track and multi-track have scores that are further away from the means of their sub-population's various tests. Due to this fact, it can be construed that a few dual-track and multi-track immersion schools will have students who are achieving high scores on each test and, therefore, will be part of the top 10 group of schools. This fact may also explain why it is likely that dual-track and multi-track schools might be overly represented in the 10 schools achieving the lowest student achievement scores. These interpretations of the results were used to create interview questions and to identify the top achieving schools and their principals. The questions were asked to the six current and former principals of the five French immersion schools who were identified (according to their school results on provincial achievement tests over the

years selected) to participate in the study (see Appendix C, Interview Questions 13, 14, and 15).

Summary

Learner Assessment Branch provided data on grade 6 provincial achievement tests between 1996 and 2000 for students enrolled in immersion centres (Immersion) and immersion students attending dual-track or multi-track schools (Dual). These data were organized in tables (see Table 1 to Table 4). The difference between the Total Test Mean (Dif Total Test Mean (%) in Table 1 to Table 4) of both immersion sub-populations showed that, for the four subjects tested in French, French immersion students enrolled in immersion centres were achieving better results in all of the subjects, for each of the years that were used for this study. This difference has also been increasing in all of the subjects between the 1997-1998 school year and the 1999-2000 school year. The only time that the mean of the dual-track and multi-track students was superior to the mean of students in immersion centres happened on the 1996-1997 French language arts test (see Table 1).

Furthermore, Table 1 shows that, compared with the results in the other three subjects (Table 2 to Table 4), French language arts is the subject that has the least difference in Total Test Mean results between the two immersion sub-populations. The difference in the Total Test Mean of the two sub-populations shows a greater gap in achievement in mathematics, science, and social studies (see Table 2 to Table 4). Social studies is the subject where this difference has been the greatest over the 5 years explored in this study (see Table 4).

Alberta Learning also provided individual school results. Each school was ranked according to its students' results to identify the top 10 schools. Only the top six schools were used in this project; but the ranking of these top 10 schools revealed that there are some dual-track or multi-track schools that are achieving better provincial results than some immersion centres. Out of the top 10 achieving schools identified, eight were dual-track or multi-track schools and two were immersion centres.

The interpretations of the two types of quantitative data lead to the creation of specific interview questions (see Appendix C, Interview Questions) and to the identification of the top achieving schools and their principals.

CHAPTER 5

ANALYSIS OF THE QUALITATIVE DATA

Introduction

In the first part of this chapter, to ensure transferability, a description of the students and of the schools in which the principals who were interviewed worked is given, the cultural linguistic characteristics of the French immersion teachers of the five schools is included, and the principals' professional background is provided. For ethical reasons, pseudonyms have been used instead of the real names of the schools and of the principals.

Next, the findings of this research based on interpretational analysis of the data are organized into themes. The main themes that surfaced from the analysis of the interview data are: hiring quality teaching staff, having good relations between teachers, support for struggling students, involvement of parents, and the principal's leadership. Table 5 is placed at the end of this part of the chapter and shows predominant themes and sub-themes as indicated by the principals who discussed them in their interviews.

In the last part of the chapter, the principals' explanations about the fact that students from immersion centres are achieving higher scores than dual-track and multi-track immersion students are presented. The reasons given by the principals were clustered in themes that were assembled under three main headings. These headings stemmed from the quantitative results exposed in Chapter 4 and were used as question to the principals (see Appendix C, Interview Questions 13 to 15). These headings are: (a) immersion centre students achieve the best results, (b) social studies: greatest achievement gap; and (c) French language arts: smallest achievement gap.

Schools' Descriptions

Amethyst School

School's Characteristics

Amethyst School is a kindergarten to grade 6 dual-track school located in a large urban area in Alberta. Approximately 500 students attended the school each of the 5 years included in this study. The students were more or less evenly distributed between the French immersion program and the regular English program with each having roughly 250 students. In the 1999-2000 school year, the teacher-pupil ratio for the grade 1 to grade 6 classes was 25:1 in the French immersion program and 25.625:1 for the regular English program. Amethyst School had at least one full French immersion class in each grade for the five-year period covered in this study and one or two combined classes (students in two different grades functioning as one class) being taught depending on the year.

In the French immersion program, the physical education classes were taught in French since the homeroom teachers were teaching this course. However, music was taught by a specialist who spoke only English, therefore French immersion students were taught this subject in English. French immersion students began to be formally taught English in grade 1.

The location of the classrooms in the school is organized according to grades not according to programs; therefore French immersion classrooms and regular English classrooms are side by side throughout the building. The students' French material displayed on bulletin boards throughout the school would inform a visitor who entered Amethyst School that a French immersion program is taught in the building. The

announcements on the intercom system are in English. The school assemblies are conducted in English. The national anthem played every morning is bilingual.

Description of the Students

The French immersion students of Amethyst School are mostly from families that have high socio-economic status. The school population is very homogenous with about 90% of the students from upper middle class Anglo-Saxon parents who are often high-level professionals like lawyers, professors, or doctors. Less than five students at the school have parents who are Francophone. According to Mr. Abbott, the principal, the students of Amethyst School "tend to be more academic there [and] there are less behavioural problems". Mr. Abbott stated that French immersion "is not a program for the masses". He went on to say,

> [T]his is a program for bright kids; they're going to be able to do everything that the kids in the English program are going to do, but they are going to be able [to do it] in either language and either language equally effective. So don't send me a child…don't put your child in this program if it's going to be over their head, and they're going to need special help and attention because this is an English environment that they're going to be in [name of the urban area], and predominantly they need to know how to read and write and numeracy in English. And French would be nice, but if they're going to have trouble in English, don't put them into French.

Considering Mr. Abbott's views and the way he describes the students that should be in the French immersion program, it appears that the students attending Amethyst School

may have greater academic capabilities than average students and even possibly have greater academic capabilities than students that attend French immersion programs in the rest of the province.

Students' Retention Rate in the French Immersion Program

Mr. Abbott was asked to think of the typical size of a French immersion kindergarten class in his school. Next he had to determine how many of the students who started kindergarten in French would usually complete grade 6 in the immersion program. He explained that, in his school, the students' retention rate in French immersion was very close to 100%.

> Well we would retain most of them - they would be there for the entire time - but we would also gain some. See I would accept kids into French immersion in from kindergarten that had taken an English kindergarten, found that the child...they're now looking for an additional challenge. They just flew through the English program, and I'd like another challenge. And we would get two or three of those that would come into French for the first time in grade 1. And we might lose a couple out of kindergarten that decided that wasn't for them. And so those two numbers would balance out. From then on, over a period of years, we might lose a very small percentage but it would be because a parent was transferred, it wasn't related to the program as such and it wasn't related usually to success or failure. In the terms of success or failure, there would be very, very few that would move.

Cultural Linguistic Characteristics of the French Immersion Teachers

In the 1999-2000 school year, Amethyst School had eight teachers involved in the French immersion program. Four of these teachers were born and raised in Alberta and have Francophone roots. Out of the other four teachers, one was raised in Ottawa, one was from New Brunswick, one was from Montreal, and the last one came from France. All of them were raised speaking French at home.

Principal's Professional Background

The principal of Amethyst School, Mr. Abbott, has been a school administrator for more than fifteen years. He was appointed principal of Amethyst School prior to the 1995-1996 school year, which is the first year of achievement test data included in this study. He has been at the school all of the years over which the student achievement data was collected. Before he became principal of Amethyst School, for several years, he was assistant principal of another dual-track school belonging to the same school authority as Amethyst school. Mr. Abbott only speaks English and considers that he has a very limited knowledge of French. However, he did not feel that it had a negative impact on his ability to be the principal of a school offering a French immersion program.

Beryl School

School's Characteristics

Beryl School is a kindergarten to grade 6 dual-track school located in a medium-sized urban area in Alberta. Approximately 380 students attended the school each of the 5 years included in this study. Slightly more than 70% of the students were enrolled in

the French immersion program while a little less than 30% of the students were attending the regular English program. In the 1999-2000 school year, the teacher-pupil ratio for the nine grade 1 to grade 6 classes was approximately 25:1 in the French immersion program and 27.5:1 for the regular English program. Beryl School had at least two full French immersion classes in grades 1 to 3 and one class in grades 4 to 6 for the five-year period covered in this study.

A particularity of the school is that it has a specific focus on fine arts. Students have special classes where they can develop their artistic talents in music, fine arts, theater, or dance. In the French immersion program, the music classes were taught in English; but the physical education classes were taught in French. Immersion students begin to study English language arts in grade 1.

Classrooms offering the same grade are located next to one another in the school; therefore French immersion classrooms and regular English classrooms are together throughout the building. Beryl School shows visitors that it offers a French immersion program by (a) using bilingual signs, (b) using letterhead with the name École Beryl School on it, and (c) having a secretary that greets them in both French and English. The morning announcements are in English. They would sometimes include a specific message in French for a particular group of students. The assemblies are conducted in English.

Description of the Students

The French immersion students of Beryl School are mostly from families that have a high socio-economic status. The school population is very homogenous without specific particularities related to ethnicity. Almost all students come from middle class

Anglo-Saxon parents. Very few students at the school have parents who are Francophone. Some students have grandparents who speak French; but their parents do not. Because of its focus on fine arts, Beryl School attracts students whose parents, in addition to learning a second language, want their children to develop their artistic talents.

Students' Retention Rate in the French Immersion Program

Mr. Borden explained that the students' retention rate in the French immersion program at his school was close to 90%. He gave details as to how many students would leave the French immersion program at each grade until the students reach grade 6.

> We generally start with groups of 50 in kindergarten and we usually gain about six who join us coming in to grade 1. If I had to look, I'd say we probably lose, each year, you want them in percentages? OK out of a class of 50, so these are just the numbers, beginning in kindergarten we might lose...we typically lose at least one and maybe two. We don't lose many kids in grades 1 and 2, maybe throughout both of those years, let's say one kid in each year. The end of grade 3 is one of the bigger drop-off areas. As the kids...we know the kids better, we've tried learning assistance, we've tried learning assistance in English, we know that the curriculum is going to become much more demanding in grade 4 as they start doing projects and writing assignments and so on. We also have the benefit of how they've done on the provincial achievement test scores. So grade 3 is probably one

of the bigger years, but I wouldn't say we lose more than two again. Grades 4 and 5 tend to be a little quieter, we may lose one each year.

Cultural Linguistic Characteristics of the French Immersion Teachers

In the 1999-2000 school year, Beryl School had 10 teachers involved in the French immersion program. Four of these teachers were born and raised in Alberta and have Francophone roots. Four teachers were born and raised in Quebec. French is their first language. One teacher came from a Caribbean island and was raised by French-speaking parents. One teacher is an Anglophone from Alberta and learned French as a second language.

Principal's Professional Background

The principal of Beryl School, Mr. Borden, has been a school administrator for almost 10 years. He became principal of Beryl School in August 1993 and he has been at the school all of the years over which the student achievement data was collected. Before he was appointed principal of Beryl School, he was an assistant principal at another dual-track school belonging to the same school authority as Beryl school. When Mr. Borden first started his teaching career almost 20 years ago, he taught in a grade 4 French immersion class. He grew up in Quebec and he does not consider himself completely bilingual, but he states that he knows enough French to "get by" and to talk in French to immersion teachers when he is in front of the students.

Carnelian School

School's Characteristics

Carnelian School is a small kindergarten to grade 6 French immersion centre located in a large urban area in Alberta. According to Ms. Clark, one of the two

principals interviewed, the school is located "in an upper socio-economic neighbourghood". Approximately 200 students attended the school each of the 5 years included in this study. Carnelian school only offers French immersion to its students. In the 1999-2000 school year, the teacher-pupil ratio for the grade 1 to grade 6 classes was approximately 25:1. The class sizes tended to be larger in the kindergarten to grade 3 classes; but the size would slightly diminish in the upper grades, as families would move away from the neighbourhood. Carnelian School had a full French immersion classes at every grade from kindergarten to grade 6 for the five-year period covered in this study. Furthermore, Ms. Clark stated that "interestingly we had an even split between boys and girls, which I found interesting because you find more girls in French immersion".

According to Ms. Campbell, the second principal who was at Carnelian School during the 5 years included in this study, a visitor entering the school would see displays on the walls that were both in French and English. She added that when she would take visitors around the school, she would always introduce them in French. The visitors would also hear French being spoken as the classroom doors where left open most of the time. Ms. Clark mentioned, "Our telephone greetings were in French. Our secretary was French and she would speak French before she would speak English". Ms. Clark revealed that,

> [A]ll the signage in the school was French. And so, when you went to the office it was 'le bureau'. When you went to the library it was 'la bibliothèque'. 'La salle de classe'. 'La toilette'. All of the signage was

done in French. And we did that on purpose. Again trying to promote a French setting if you will.

Finally, Ms. Clark pointed out that all the information that was communicated to the general public explicitly described Carnelian School as a French immersion centre.

Even though Carnelian School is an immersion centre, music and physical education classes were offered in English due to the fact that it was extremely difficult to find specialists who could teach these subjects in French. However, for the kindergarten to grade 3 students, the physical education classes were taught by the homeroom teacher; therefore the students would receive instruction in French. The students would begin to receive formal English language arts lessons in grade 3. The assemblies and announcements were conducted in French.

Description of the Students

The school population of Carnelian School is very homogenous in the sense that the students come mostly from families that Ms. Campbell described as "fairly affluent". Ms. Clark observed that most of the students were born in Canada. She conveyed that, due to the nature of their parents' work involving travel around the world, many students have international connections. Despite these connections, only a very small percentage of the students at Carnelian School have parents that speak French.

Ms. Clark maintained that "when the students came to school they already had well established social skills. They had positive self-esteem. They had solid first language skills. And so they were ready to learn". Ms. Clark also stated that the students

did not lack the basic necessities. She said, "the students come to school ready to learn. They're clothed. They're fed. They feel safe".

Students' Retention Rate in the French Immersion Program

The two principals who were at Carnelian School during the five-year period that was studied in this research had different numbers in terms of the students' retention rate at their school. Since Carnelian School is an immersion centre, the students that left French immersion had to transfer to a different school.

Ms. Clark talked about why the students' retention rate was high at Carnelian School.

> I would say at least 90% of them, all right? And one of the things I alluded to before is the fact that the population at [Carnelian School] was very stable. And when we lost students it was often because they moved, you know, that the parents were transferred, for example.

According to Ms. Campbell, the students' retention rate at Carnelian School was around 80%. She also added that the school lost students mostly "because they moved, it wasn't because they dropped out of French immersion", which is the same explanation Ms. Clark provided as to why Carnelian School lost some of its students.

Cultural Linguistic Characteristics of the French Immersion Teachers

During the years covered in this study, Carnelian School had seven teachers involved in the French immersion program. Their ages ranging from the early twenties to the mid-thirties. Three of these teachers were Anglophone who had learned French as a second language. Two teachers, born and raised in the Prairie provinces, were Francophone. The remaining two teachers were Francophone from Quebec.

Principals' Professional Background

Ms. Clark.

From the 1995-1996 school year to the 1997-1998 school year, Ms. Clark was the principal of Carnelian School. She was appointed at Carnelian School in the spring of 1995. This was her first experience as a principal of an immersion school. Ms. Clark had also been a school administrator in regular English many years prior to having been appointed to Carnelian School. Her other professional experiences included having taught at six other elementary and junior schools belonging to the same school authority as Carnelian School. For a few years, she was a specialist who only taught French as a Second Language. She spent most of her career as a generalist, teaching all subjects at various grades.

Over the years, she took French language courses during the summer in both Europe and Quebec. Her graduate studies focused on staff development. She considers her French to be "conversational". She believes it is important to model her learning of French in front of the students and to talk to them about how as an adult she is a lifelong learner of French.

Ms. Campbell.

Ms. Campbell was the principal of Carnelian School for the 1998-1999 and 1999-2000 school years. It was her first experience as an administrator of a French immersion school. Prior to her appointment to Carnelian School, she was an administrator in a school that only had a regular English program and that belong to the same school authority as Carnelian School. She did not consider herself to be bilingual, but she knew enough basic French to be able to carry some conversations with the

students. However, she felt it was important to show them that she was trying hard and that she was eager to improve her French. Curriculum development was her area of expertise.

Diamond School

School's Characteristics

Diamond School is a kindergarten to grade 9 dual-track school located in a medium-sized urban area in Alberta. Approximately 340 students attended the school each of the 5 years included in this study. Diamond school offers French immersion from kindergarten to grade 9 while the regular English program has classes only from grade 7 to grade 9. It is the only school in the community offering French immersion. The students are more or less evenly distributed between the French immersion program and the regular English program. In the 1999-2000 school year, the teacher-pupil ratio for the five grade 1 to grade 6 classes was approximately 21:1 in the French immersion program.

Diamond School did not have a full French immersion classes at each grade from grade 1 to grade 6 for the five-year period covered in this study. There was at least one class combining two grades each school year included in this study. Most years, the combined class was found in the second division (grades 4 to 6). French immersion students began to receive English language arts instruction in grade 1. Music and physical education classes for French immersion students are taught in English. The school announcements and the messages are in English.

Since the elementary students are all enrolled in French immersion, the kindergarten to grade 6 classrooms are located together in one part of the school.

However, the junior high French immersion classrooms and regular English classrooms are together in the other areas of the building. According to the principal, Mr. Diefenbaker, a visitor entering the school through the elementary doors would see artwork and student writings in French, but a "person walking in the main door wouldn't necessary know that this is a French immersion school". However, the brochures depicting the school talk about the French immersion program. Even though the school's name has officially been changed to École Diamond School, the principal mentioned that the sign outside the school still shows the name Diamond School written only in English.

Description of the Students

The immersion students of Diamond School are mostly from families that Mr. Diefenbaker describes as "typical middle class". The school population is very homogenous without specific particularities related to ethnicity. Mr. Diefenbaker also believes that the immersion program has brought to Diamond school "some of the kids who are better students". He also stated that Diamond School does not "have a lot of students coming to school who are missing basic needs". Only a very small number of students have parents that speak French; but these parents are often volunteering their time to help the teachers.

Students' Retention Rate in the French Immersion Program

The students' retention rate at Diamond School was the lowest of all the five schools included in this study. Mr. Diefenbaker related that about 65% of the students who started kindergarten in French immersion would still be in the program at Diamond

School by the end of grade 6. He explained how he came up with this percentage and what happened to the students.

> [H]ow many would we start with? Twenty? We would probably retain maybe thirteen. Now let me just think. We had seventeen kids in grade 3, and 16 kids in grade 3 when I taught it here, those kids are now in grade 8, and I think there's eleven. Some of it is because they are moving, this a military base town, and so some of them...and quite often it's the service people that have their kids in French immersion. And some of them drop out for other reasons. So I would say that that's probably pretty typical.

Cultural Linguistic Characteristics of the French Immersion Teachers

In the 1999-2000 school year, Diamond School had six teachers involved in the French immersion program. Their ages ranging from the early twenties to the mid-thirties. Five of these teachers were born and raised in Alberta and had learned French as a second language. The other elementary teacher is a Francophone who was born in Alberta and raised by French-speaking parents.

Principal's Professional Background

The principal of Diamond School, Mr. Diefenbaker, has been a school administrator for a little more than five years. He became principal of Diamond School in August 1998 and he has been at the school the last two years over which the student achievement data was collected. Before he was appointed principal of Diamond School, he was principal and assistant principal at other schools belonging to the same school authority as Diamond school. Prior to becoming an administrator, Mr. Diefenbaker

taught for a few years at Diamond School in the regular English program. He considers himself unilingual; but he has started to take French courses on Saturdays to supplement what he could remember from the French 30 classes he took in the late sixties. He also enrolled in an immersion summer program in Quebec. He is making a conscious effort to use as much French as he can in front of the students.

Emerald School

School's Characteristics

Emerald School is a kindergarten to grade 6 dual-track school located in a medium-sized urban area in Alberta. Approximately 350 students attended the school each of the 5 years included in this study. Emerald school offers both French immersion and the regular English program from kindergarten to grade 6. It is the only school in the community offering French immersion at the elementary level.

Approximately two third of the students are enrolled in the French immersion program while one third of the students attend the regular English program. Over the years, the teacher-pupil ratio has stayed around 25:1. The French immersion program has a higher teacher-pupil ratio at about 27:1 when the teacher-pupil ratio for the English program is about 21:1. Emerald School has had a full French immersion class at every grade from grade 1 to grade 6 and for the five-year period covered in this study. In addition, there was at least one class combining two grades or even two classes at certain grades each school year included in this study.

For French immersion students, each homeroom teacher taught physical education classes in French, but a specialist taught the music classes in English. French

immersion students begin formal English language arts instruction in grade 3. The school announcements and the assemblies are in English.

The classrooms are grouped so that students in the same grade are together in the school; therefore French immersion classrooms and regular English classrooms are next to one another throughout the building. The principal of Emerald School, Mr. Elliott, declared that a visitor entering the school would see French bulletin boards next to each immersion class and French would be heard coming out of certain classrooms. Mr. Elliott stated that when he takes people on school tours, he takes them into French and English classrooms. When documents depicting the school are published, they inform the readers that the school offers a French immersion program. On the letterhead, the name of the school is first written in English and École Emerald immediately follows it. The motto of the school is also printed both in English and in French on the letterhead. A big bilingual mural is also painted on the wall facing the office. Interestingly, in the basement of Emerald School, the school authority has leased some of the previously vacant rooms to a private company that has set up a French immersion preschool. Mr. Elliott mentioned that, when they reach school age, most of the students who attend the private French immersion preschool start kindergarten at his school. There are between 10 and 15 children attending this private preschool.

Description of the Students

Emerald School has French immersion students that are from families that Mr. Elliott describes as "upper middle class". The school population is very homogenous in the sense that most of the students are of Anglo-Saxon origins. Mr. Elliott also added, "[T]he vast majority of the kids come from families where the parents are professionals

of some kind". Very few students have parents of Francophone background; but more than a dozen have parents who took French in high school and at the university. According to Mr. Elliott, these parents are comfortable enough with French to volunteer and help the teachers in the lower grades.

Students' Retention Rate in the French Immersion Program

Like the other principals in this study, Mr. Elliott declared that that the families of French immersion students seem to move more than other families.

> I'm finding that the French immersion students are tending to be a little bit more...well their parents are more mobile. Put it that way. We've got a lot of kids that are transferring in and out. Because of their parents moving. So I'm finding that there's a lot of French immersion kids moving into the city, but probably an equal number are moving out too.

Despite the mobility factor, he considered that the students' retention rate in the French immersion program at Emerald School is close to 90%.

Cultural Linguistic Characteristics of the French Immersion Teachers

In the 1999-2000 school year, Emerald School had nine teachers involved in the French immersion program. Their average age was about 35 years old. Five of these teachers were born and raised in Alberta and had learned French through formal classes as they went to school and university. The other elementary teachers are Francophone who were born and raised either in different provinces of Canada or in different French-speaking countries.

Principal's Professional Background

Mr. Elliott has been a school administrator for a little more than five years. He became principal of Emerald School in August 1998 and he has been at the school the last two years over which the student achievement data was collected. Before he was appointed principal of Emerald School, he was assistant principal at another school belonging to the same school authority as Emerald school. Prior to being appointed assistant principal, Mr. Elliott taught for several years in the immersion program. He is bilingual. He took his university education in French in Alberta. He tries to speak French as often as he can in front of the students and he expects immersion students to address him in French both inside and outside of the school.

Themes

Hiring Quality Teaching Staff

During the interviews, all the principals praised their teaching staff for the students' success. They believed that the teachers played a key role in the excellent results achieved by the students in their schools. These beliefs are supported by several research. In her study, Darling-Hammond (2000) suggests:

> [S]tates interested in improving student achievement may be well-advised to attend, at least in part, to the preparation and qualifications of the teachers they hire and retain in the profession. It stands to reason that student learning should be enhanced by the efforts of teachers who are knowledgeable in their field and are skillful at teaching it to others. (pp. 34-35)

Brewer (1993) explains:

> [T]he major route through which principals affect students is via teacher selection . . . principals play an important role in the selection of teachers. This range from active involvement in the hiring process from the outset, to making selection from a short list supplied by the district, or the power to block the appointment of particular teachers. (p. 282)

Zigarelli (1996), using results of a regression analysis in his research, shows:

> A principal's management responsibilities can make a difference, however, when he or she hires or fires teachers and staff. This coefficient, significant at the 1% level, strongly supports the notion that the more autonomy a principal has in such personnel decisions, the greater students' school performance will be. (p. 106)

Kaplan and Owings (2001) convey similar results. They state, "Teachers and teaching quality make measurable differences in student learning" (p. 71). They go on to write, "Principals must do everything possible to hire the highest quality teachers" (p. 71). Reeves (1998) concludes that principals who have very limited control over the hiring process of teachers should not be held accountable if student achievement in their schools is not improving.

Finally, Alberta Learning (2002) outlines some of the characteristics that French immersion teachers should have.

> As well as being qualified to teach at the appropriate grade level(s) and subject area(s), ideally French immersion teachers should also have

- native or native like fluency in both oral and written French;
- training in and a good understanding of immersion methodology (pre-service and/or in-service);
- a personal understanding of French culture; and
- the ability to communicate in English orally and in writing for non-instructional purposes. (p. 25)

The principals interviewed in this study described some of the qualities and attributes that they were looking for in their teaching staff. Some of these qualities and attributes include a strong knowledge of the curriculum, good teaching practices to use with children, the ability to communicate effectively in French, and having high expectations.

Knowledge of the Curriculum

Many principals emphasized the importance for teachers to possess a strong knowledge of the various curricula that serve as foundation for their instruction. When he hired new immersion teachers, Mr. Borden declared, "[Y]ou look for their curriculum ability. If you're looking at a grade 1 teacher you want someone who knows the reading process inside out".

Ms. Campbell believed that only once teachers have a strong grasp of a particular curriculum can they "interpret it in a way that is going to be meaningful to students". She was adamant about how teachers have to use the curricula.

> I did want a teacher who was prepared to look at curriculum in ways that moved away from extremely traditional. I'm not saying that we

need to throw everything out, but I wanted someone with an open mind who was going to be very reflective about their work.

This view is supported by Kaplan and Owings (2001) who write:

> When a classroom is working well, both students and teachers will connect the curriculum to their own interests, life experiences, and prior learning. This behavior increases personal meaning for students and makes it more likely they will remember and use what they learned. (p. 69)

Mr. Abbott cited the example of a former teacher of his who, in his opinion, did not pay attention to the outcomes of the various curricula and had a negative impact on students' results.

> [A] teacher was busily working away and making all the posters in French and you know, I just said I'm unilingual, so my French, and my evaluation of what's going on there is not very good. So I go in and talkto the teacher after looking at the grade 7 results of the kids coming back and our kids are going over, they're getting honours in everything related to English and they're bombing out in French. So why is that happening when the teacher's giving them...they're bright kids, we know that, they're doing well in other things, what's happening in their French? We found that she was teaching her own little curriculum. Her class could get around the metro in Paris. That's where she was interested in. They knew impressionist art. But they didn't know like numbers and colours and stuff like that, they get to

> the junior high, the teacher's going to quiz you on numbers and colours and you have no idea what they're talking about. So, you've got to make sure that you're teaching what it is you're supposed to be teaching ...

Furthermore, Mr. Abbott stressed that he has learned from this experience and that the teachers at his school choose activities that were directly related to curriculum outcomes. He said that "the focus that we put on things was, 'is that something that is in the curriculum that we need to do?' and, we do it. And we do it very, very well". He mentioned that the knowledge of the curriculum his teacher had extended beyond the grade they were teaching.

> [T]hey know what it is the kid needs to know for that grade level or teaching, and also what they should have learned in the previous grade level. So they have had a range of teaching skills themselves, they've taught at different grade levels, they understand what the child needs to learn, and concentrate on that.

Mr. Elliott said that his school authority has been helpful in supporting the administrators who believed in improving their teachers' knowledge of curriculum.

> The school district has freed up some money for curriculum projects, and we've partnered up with the high school so that six teachers can get together and articulate the program from grade 4 to grade 8. The French program so that the kids have...the teachers know what...the grade 8 teachers know what's happening at elementary school and the

> elementary teachers know what's expected of the kids as they go into grade 7.

Mr. Elliott's comments are sustained by the findings of Leitner (1994) that concludes that student learning is influenced by teachers who are supported in their efforts to teach "the school's curricular and instructional program" (p. 222).

Good Teaching Practices to Use With Children

Several principals declared that the most important criterion they were looking for in prospective teachers was their ability to teach children effectively. Ms. Clark stated that, as a principal, "you want to hire good teachers". Ms. Campbell said that she wanted to work with teachers "that certainly would work with children in very respectful ways. She shared an experience she had with a former student teacher of hers.

> I know that...one time I took a student teacher when I was teaching French as a Second Language from the university of Calgary...this was quite a few years ago. And she had a horrendous practice. But she spoke French. And she...and I thought "Would I want her as a staff member? Quite frankly no".

Ms. Campbell also provided the example of one of the teachers she had hired at Carnelian School to show how important it is for her to find a teacher that can create interesting experiences for her students.

> [O]ne young woman that we brought on as a maternity leave and then we got to keep her as a permanent staff member . . . she had such a wonderful manner with children, both in building community as well as looking at the curriculum. In terms of looking at mathematics not

just as arithmetic, but in a much broader sense. And the language experiences that she would provide for children. So it was those kinds of things that I personally looked more for.

Mr. Elliott declared that he was looking "for a teacher who's going to . . . give good instruction". He added that any other ability a potential candidate might have "doesn't override the considerations of good teaching". Mr. Diefenbaker pointed out that when he observes his new teachers he wants to see "how they deal with children". He also revealed that he wants "staff members that are very child-centered, very interested in having children do their very best, reaching their potential in all areas".

The beliefs expressed by the principals regarding the importance of hiring teachers that demonstrate good teaching practices is sustained by Kaplan and Owings (2001) who write that principals have to "[e]nsure that all teachers know and use instructional best practices that promote all students' learning" (p. 70). They even state that principals should "[v]igorously seek these behaviors in all classroom observations and teacher conferences" (p. 70).

Ability to Communicate Effectively in French

The six principals commented that the ability to communicate effectively in French was a quality that they were looking for when they interviewed potential teachers. However, speaking French fluently was not in all cases the most important factor that led to their hiring of teachers. Lamarre (1989) states:

> Because of the high demand and the lack of availability of qualified teachers, some principals are torn with having to choose between a

> teacher whose French language proficiency is "somewhat suspect"
> and one who has sound pedagogical skills or vice versa. (pp. 99-100)

The principals in this study all seem to still face this same problem. Depending on what they valued most, French language proficiency or good instructional practices, the principals chose their immersion teachers.

Mr. Elliott described how he chooses his French immersion teachers.

> Personally, the French language ability of the candidate is not my prime consideration. I look for a teacher who's going to fit in the staff and give good instruction. And so depending on the exact assignment, different levels of French ability will be acceptable. I mean they have to be able to speak French, but I have teachers who have, for example, taught core French for 12 years or longer who worked very well with primary students and are quite able to do, like, a reading resource room program. So just being able to speak well in French doesn't override the considerations of good teaching.

Ms. Campbell mentioned that when she hired teachers she "didn't necessarily look just for the language and whether they were fluent in French or not". Even though she was looking for more than the ability to speak French during the interviews, Ms. Campbell added that "obviously if you can't speak the language they're not going to be teaching at a French immersion school, or they shouldn't".

When Mr. Diefenbaker listed the criteria that he uses to decide which teachers he would hire, he said that he wanted "staff members that are very child-centered, . . .that are very hard working, . . . dynamic, [and] . . . are willing to take risks or accept

change". His last comment regarding his selection criteria was that "[o]bviously the level of the French is very important".

Mr. Borden believed that the people he hires should not only speak French effectively; but they should also possess a strong French cultural background.

> It's very difficult for me to hire someone who is not Francophone. French as a second language, or people for whom French is second language, unless they can convince me that they can bring the whole ball of wax with them, that they can bring the "joie de vivre", they can bring the excitement of the language, they can bring the excitement of the French culture, because French immersion is just that: you're not only immersing yourself in the language, you're immersing yourself in the whole French culture. And someone has to be able to bring that to the classroom if they're going to present a French immersion classroom. So a student who has been through, let's say, French immersion, has been to Faculté St. Jean, they need more than that too for me to really look at them. Often the kids who I've hired who had that may have spent time in France or time in Quebec or time in...but they've in the culture and they know the culture. For us we also then look for somebody with a fine arts background . . . We want people who very much believe in their language and their culture.

Ms. Clark thought that the French immersion teachers she hired had to have good French skills. She stated that, as principals, "yes you want to hire good teachers,

but we want to know that the teachers we are getting are proficient in language". Ms. Clark went on to explain how the language proficiency would be determined during an interview.

> I also have a Francophone administrator sit in on the interview, and some of the questions are asked in French, and after the candidate leaves, then we debrief. I'm very good at figuring out their level of French, by the way. Because when [the Francophone administrator's name] does the reality check with me I'm usually right on as far as accent, ability, use of verbs, errors, fluency, intonation, all of that.

Mr. Abbott listed the ability to communicate effectively in French as the third criterion that a potential teacher had to meet in order to be hired. The emphasis a teacher puts on student achievement and a strong knowledge of curriculum were his first two criteria. However, he stated that, if a candidate would not have good French skills, he would not hire this person.

> I would march them [candidates] out to one of my other staff that I knew had very good French skills, and say "talk to them a bit. Talk to them for 10 minutes." And then we'd compare notes at the end of it. And they say "well, you know, their French isn't very good." Ok, you're out the door. You've got to have the good skills "Oh, ok well this one's got really good French skills or this one's got a lot of grammatical errors and 's' are left off of some things, and plural forms and so on. And some of the nuances of the language came through not quite right." Well, that's not who you want setting the

example for the kids. If they're going to teach it. Now, interestingly enough that didn't necessarily mean that the person was not a Francophone with an English background. They could still be making mistakes in their first language, being French, the same as a person with their first language being English can make mistakes, grammatically and so on. Anyway, that would be one of the things that I would look for, and I would ask for second screen with someone else.

Having High Expectations

Glidden (1999) identifies three major factors that explains why certain schools have students who are achieving better results than expected due to their low-income characteristics. As the first factor, he mentions a positive school climate where "high expectations for all students (with no exceptions)" (p. 25) are established. This finding supports the comments of four of the principals who reported that it was important to them to have teachers with high expectations for students.

Mr. Elliott stated that his "teachers tend to have very high standards for student achievement. And throughout the years parents have come to accept that and work towards that also". Mr. Diefenbaker talked about how he liked to hire teachers who "had high expectations for behaviour, high expectations for academics".

On a similar note, Mr. Abbott said that he looked at "what emphasis does a teacher put on student achievement". He went further to add that his questions to prospective teachers "were coming back a lot to the 'what have you done for student achievement?'".

Ms. Campbell described how important it was at her school to provide students with stimulating, valuable, and complex learning experiences. She spoke of the "need to nurture an intellectual educational community" and of the constant made "at not trivializing the experiences that we give children". Ms. Campbell wanted the teachers to always keep in mind the question "How are we really challenging the children's thinking?".

Having Good Relations Between Teachers

Many of the principals mentioned that one of the reasons that their students were having excellent academic results was because the teachers from all programs were working well cohesively as a staff and that there were good relations between the teachers, either because few conflicts arose or because they were resolved quickly. This explanation is supported by Eberts and Stone (1988) who maintain that "principal leadership in instructional activities and in conflict resolution are clearly important to student achievement" (p. 298).

The principals said that the language spoken among teachers, the feeling of equity between the immersion and English program and the open communication between individuals helped explain why there were good relations between all teachers.

The Language Spoken Among Teachers

Several respondents interviewed expressed the importance of having all staff members speaking English among themselves to keep the relations harmonious and avoid tensions between the teachers. They explained that the English teachers often did not understand French and that they felt uneasy when groups of people would speak French and not include everyone in the conversations. A few administrators in a study

by Lamarre (1989) convey a similar sense of uneasiness when French was used by French-speaking staff members in the teachers' lounge. Some of the administrators in her study even went as far as to impose the use of English in the staff room. Lamarre states, "They justified it by saying that speaking English not only facilitated communication between immersion and non-immersion teachers, but also helped in fostering a climate of trust between staff members" (p. 80).

Similar arguments to encourage the use of English among staff members were found in this study. For example, Mr. Abbott declared that the language used for communication between staff members was English in order to develop staff cohesion.

> Our French immersion teachers are…they teach French, but they are also as able to communicate, at least orally, in English. They're able to sit around the staff room table and understand what's going on and discuss the news of the day and everything else. So I think that that tends to build a cohesive staff where we're all doing the same kinds of things.

Mr. Abbott went on to share an example from the previous school he worked at to show how the use of French and English could cause tensions.

> We would have all the French immersion teachers at this side of the table, and all of the English teachers communicating at that [end of the table]…even for things like lunch. Because the English teachers couldn't talk to the French teachers - they were speaking in French. That generates some problems…

A few administrators mentioned that the use of both French and English or the exclusive use of English by teachers is a conscious and careful choice made to create a good atmosphere.

Mr. Diefenbaker noted that mostly English was used in the staff room and commented on the possible negative side effects for French teachers of not using French.

> I think also the staff that we've had here have worked hard to be pleasant to others. And in one hand, for example even in the staff room, there's not an awful lot of French being spoken. And it may be a negative fact from the standpoint that the teachers aren't practicing their French in a collegial way, but on the other hand it certainly creates for a very pleasant staff room environment.

He also gave an example how French conversations are taking place in the staff room. Mr. Diefenbaker explained that "quite often if the teachers are talking in French it becomes kind of a...just a very quiet kind of conversation and they're speaking in French just because it's just more natural to do".

Mr. Elliott shared a similar example.

> In the staff room, it's accepted that if you're speaking when the majority of people that are listening are English-speaking, then you're speaking in English. But if you're having a conversation, if people who are more comfortable with French are having, you know, individual conversations, they will be speaking in French. People speak at the comfort level of people around them. And that's just

understood here. And so as an English-speaking teacher, if you go to the staff room and you hear some people talking in French, you just understand that that's how they're communicating at their comfort level. But if it was a staff meeting and some people wanted to, you know, address the staff, they wouldn't be having side conversations in French. You know, where it would look like they're saying something private that, you know, that they don't want people to know what they're talking about. You know, so it's just a matter of understanding how your conversation is fitting into the situation.

Mr. Elliot stressed the importance of being cordial in his school.

I think everybody here understands that you have to be cooperative and pleasant with other people. And when I have new staff come here, I explain that's part of our culture. You know, you're expected to understand the needs of the school, versus your individual needs.

Mr. Borden related how difficult it is to keep good relations between his staff members and how conflicts over the use of French periodically appear. He recalled the last incident that caused tempers to flare-up.

It comes up all the time because...and it blew up this year again, at the end of last year. I think there's a cycle. Probably every four or five years it blows up, but it...there was a lot of dissatisfaction in the staff, and we were finding that the teachers who were coming to the staff room were the French teachers, and they were speaking in French. And there had been a big staff turnover as well too, so that there were

some new people on staff who did things differently, and I think they also brought more of a belief in the importance of speaking French. And I was also focusing on that at the same time, that we needed to speak French more to improve the children's conversational abilities. So I think all of those things left the English side feeling put out of sorts. And we were starting to get the big divisions again, where the English side was having their lunch and not coming down to the staff room, they were doing it somewhere else. So we got together all again and we tried to bring out the issues and talk about them, and I think, again, there's two things that you need to do to try and diffuse these situations. And one is knowledge, where you let the people know why you're doing it. So we're...here's the reasons why we're speaking French when we are. And the other thing that you try to do is it's not really an issue of languages and differences, it's an issue of politeness, that if there's someone there who is English and you're speaking in French, you either switch to English for them, or you let them know that we're talking about grade 6 math in French and ...you know just to let the other person know that they're not being slighted … and I've been on both sides of this and I know that we're all a bit paranoid, and when someone's speaking another language, you tend to feel that they're speaking about you. Especially if they're speaking loudly and French tends to be a very expressive language so people are speaking loudly and laughing and waving their hands...it's very

easy to feel left out and to feel like they may be speaking about you and you have to be very careful.

Equity Between the Programs

A few respondents explained that, in order to avoid conflicts, it was important to share the resources equally between the programs and to demonstrate to the teachers that the allocation of resources is done equitably.

Mr. Abbott explained how he would organize the distribution of resources in his school.

> And I think in an immersion setting that is a dual-track program, like running two small schools, you have to make sure that you balance. It's like the Quebec/rest of Canada scenario: you have to balance what each wants here, and if you were perceived as giving one group huge benefits and not the other, in terms of staffing, class size, they would certainly let me know about it. And so if we did do that on occasion and then occasionally we did do that the teachers all had to understand that we were doing it for a particular reason; for the French this year, but that next year, we were going to benefit the English.

He gave an example to show how he addresses the problem of teachers perceiving that there was an imbalance in the allocation of resources between the two programs in the school.

> Well they both have the same access to resources, and they would come to me with a problem: "I've got a problem here because I think

that you're giving the French teachers too much." And I know that is happened sometimes before I got there. That...you know "the French teachers get everything." Well the English teachers need to understand that that really wasn't the case, and so I would make it a point during budgeting time of doing the averages not by the whole school as you would in a single-track school, but doing them by French/English, and then say "see, everybody here is getting this." Now if I'm going to split or de-split [classes], and I happen to have, say one more class to de-split in English, so I need an extra 100 minutes of teacher time in the English program, I make sure that the French have got the same 100 minutes, even though they didn't particularly need it in that area, and I come to you and say now "how do you want to deploy that?" OK, so, we keep them as even as we possibly can.

It appears that, for Mr. Abbott, decisions related to allocation of resources have to be transparent to demonstrate that he treats both programs fairly.

Mr. Elliott also believed in the equal distribution of funds and resources across programs.

We give all the students in our school equal access to all of the special resources that are available. So if I have two-thirds of the kids who are in French immersion, two-thirds of the library program, two-thirds of the music program, two-thirds of the reading resource room, early

literacy, the A.I.S.I. [Alberta Initiative for School Improvement], two-thirds of that goes to the French program.

Communication Between Individuals

One principal commented that the best way to keep harmonious relations was to be proactive and encourage teachers to collaborate together across the programs, to better understand the challenges faced in each program.

Mr. Elliot described how he likes to see teachers collaborate and how he sometimes has to insist to make this collaboration happen.

> I encourage teachers of the same grade level to work together as much as possible. For example I have a new teacher at grade 3 this year in the English program, who hasn't taught grade 3, but the French immersion teacher has been working very closely with that teacher on the curriculum, because the curriculum tends to be quite the same on the needs of the grade 3 students and the type of learning. So I encourage that a lot, and we tend not to look at school issues being French immersion issues versus English issues . . . [S]ome teachers I've had to kind of force together. You know, like for certain field trips I'll say, "this is a field trip for grade sixes and now you guys have to figure it out".

A few administrators felt that having open lines of communication between staff members was how they kept pleasant relations between teachers and how they more easily solved conflicts.

Mr. Abbott reiterated that the most important aspect of good communication for his staff members was the fact that they had English as a common language to solve problems.

> I think that the first key here as I've already mentioned that you have to communicate to solve a problem. And you can't communicate if you speak one language and they speak another. So we have to have something in common. And the English teachers don't have French, so that means the French teachers would have to have English. And I think that's the first way to resolve a problem. And the interesting thing was that we didn't have conflicts that related to French/English.

Ms. Campbell shared the strategy she used with teachers when they would come to talk to her about the personal problems and conflicts they had with one or several colleagues.

> Someone gave me some very good advice once and they said, you know, "If a teacher comes to you and talks about another staff member, always ask...or a parent, or anyone, always ask 'what would you like me to do with the information? You know, now you've told me, so now what? Am I supposed to just deal with it? Am I supposed to solve it for you?'" Often I would tell the teachers, or the staff actually, not just the teachers, that if it was with another individual, that they needed to go and talk with that individual. I wasn't going to enter into it and solve it. If it became too big, then we'd deal with it differently. But it was, you know, we're all adults, we're here for the

purpose of the children, we're here to help each other in our work. And even though it may not be in my job description or yours, how can we work together and help each other, and when you...my second year I actually started off the school year talking about...you know, we're talking to the children about respecting themselves, respecting others and then respecting our space. So how are we going to model that for the children? And so I had two staff members that...I don't know why, but they rubbed each other the wrong way. And one would come to me and then the other would come to me, and I said, "You know what? This has nothing to do with me. You need to talk to each other, first." And so things seemed to get a little better…

Support for Struggling Students

The principals were asked during the interviews what happened to the students who were experiencing academic difficulties and what type of support was offered to help them overcome their difficulties. Their answers varied greatly, from the absence of targeted support in certain schools to the use of counselors and specialists, the modification of the delivery of instruction, and the presence of French learning assistance programs for students who experience academic and behavioural difficulties in other schools.

Interestingly, three of the administrators mentioned that moving struggling students out of French immersion into the regular English program was not a solution. Their belief is supported by the research of Wiss (1989, 1993) and Bruck (1978) who

found out that the problems experienced by certain French immersion students had followed them once they had transferred to the English Program.

Ms. Campbell spoke of the change of attitudes that took place regarding struggling immersion students.

> At one time, and you're probably aware of this, years ago, if a child was experiencing difficulty in French immersion, pop them . . . into English! And of course we tried to move away from that, because sometimes it isn't the language issue, it's if they're having difficulties they'd be having difficulties in both [languages].

Mr. Borden explained how he approached parents of struggling children in grade 1 or grade 2 who would want a transfer to the English program.

> So we try to dissuade them [the parents] in grades 1 and 2 because the kid may get a double whammy: he's been unsuccessful in French and then he goes into English and lo and behold he's behind there as well, so we do try and avoid that. So we try and keep kids in French until grade 3 at least unless the wheels have totally fallen off.

Ms. Clark described an incident where a student who experienced learning difficulties had to be transferred out of immersion.

> I can remember sitting with a child and a mother in my office at [Carnelian School] and all three of us were crying because the only thing that [name of the student] could do well was speak French. He loved it. And the only way we could access really specific help for his learning disability was to pull him. And my intuition said, "What

we're doing is creating a huge negative impact on this child's self esteem." So...and well you know what, in some cases children, we know, will be fine in French immersion and we can work with their learning disability.

She mentioned the progress that was accomplished in her school authority regarding the help that is now offered to students struggling in French immersion.

> [W]e have, that would be the French principals' group, lobbied the chief superintendent to establish a French immersion learning disabilities class. And I'm pleased to say that it is housed here at [name of a school that was not part of this study]. And . . . we were one of two schools in the province that had a French immersion LD class. Next year we will have two classes, so we'll be able to accommodate children in grades 4, 5, and 6.

Absence of Targeted Support

Two principals stated that because of the funding cutbacks that took place in Alberta in the mid 1990s, they were not able to provide extra help to the immersion students who were having academic difficulties. They felt it probably had an impact on their school results mainly because the struggling students had left the immersion program by the time they reached grade 6 and were supposed to write the various achievement tests that were part of this study.

For instance, Mr. Diefenbaker described what he believed happened at his school, prior to his appointment, to the struggling immersion students who did not receive support.

> [W]e haven't had an awful lot of money in our school for French learning assistance. So I suspect over the years some of the children have dropped out of the French immersion program and have gone into English programs. And it could be because we have not institutionalized enough of that help for children in the French language.

When asked about the help the school offered to struggling immersion students in the mid to late 1990s, Mr. Borden responded, "Well that was the bad part with budget cuts because learning assistance was one of the first things that went".

Both Mr. Diefenbaker and Mr. Borden were pleased to announce that nowadays they have French learning assistance in their schools and that their students receive the help they need to cope with some of the challenges of learning a second language.

French Learning Assistance Programs

Half of the principals interviewed declared that their school was operating some types of French learning assistance programs for the students that had been identified as experiencing learning difficulties.

Ms. Clark explained the situation she faced when she first was appointed at Carnelian School and how she started addressing the issue of children needing help to overcome their difficulties.

> And so when I went to [Carnelian School], the first thing I found is that none of the children in that school had been identified with any kind of learning difficulty . . . And so that was a huge concern for me. I figured by recess of about the second day I had spotted about five

maybe six children who I suspected had problems. So what I did when I was at [Carnelian School] is we established a school resource group. Now we had a teacher who had a little bit of extra training in working with special needs kids, and myself.

Mr. Elliott revealed that his school starts to help struggling students in French by the time they reach grade 2.

At grade 2, we've started a reading intervention model. Also in grade 2 students have access to reading resource room in French. At grade 3 they have reading resource room in French and in English and that goes to grade 6.

Ms. Campbell exposed what was done to assist the struggling immersion students at her school under her leadership.

And so how are we going to work with the struggler? A couple of things: . . . every school in Alberta was given a learner assistant or a teacher aide .429. And the one we hired at the school was bilingual. So we certainly had her working with the teacher, with the students in the classroom, and ... I don't really believe in pullout programs, but every now and again, for a period of time, it's OK to do that, but not regularly with the same children all the time. So we did that, and then...because in our case one of the teachers didn't teach their own English language arts, we pulled that teacher, so while her students were being taught English language arts, she was able to at least work, for an hour a day, for maybe a period of five weeks, or six

weeks, in the classroom, with the teacher, so that they were able to have two teachers in a classroom, working with students. So we tried it that way, and it seemed to be a fairly good model to work, and I think the teachers were getting better at utilizing that model. And it was for extended periods of time.

Modifications to the Delivery of Instruction

Several respondents talked about how adaptations were made to the workload of teachers and to the way instruction is delivered to students in order to provide extra help to the children experiencing difficulties.

Mr. Abbott expressed his belief regarding resource programs and how he preferred to organize his school to have smaller classrooms in the first division (kindergarten to grade 3) to deal with the learning needs of each child and help all students succeed.

We didn't have a resource program. I don't believe in a resource program as a solution to anything. I do believe that if we can give teachers a reasonable number of kids in the class, they will be successful. And so, what I always tried to do was to keep the division one...one to three, particularly one to two, as low as we possibly could. And sometimes we would run those at 17 or 18 kids and overload the division two, to the extent where I said that last year we had 33 in the grade 6 they were all the same class. But we might have been at the same time running another program with 17 kids. And I believe that a teacher's range, even if they have some kids with

learning problems, with 17 kids you've got a chance of meeting those. And the impact you have is long term. If you put them into a resource program, the results that I've seen are that they're in the resource program this year and their results go up. And you pull the resource program away at some point and their results go back down to where they were before. This way the numbers are low, everybody can start to experience success, and you concentrate more on what is required, what is the basis.

Mr. Elliott described how his teachers would go out of their way to provide the assistance needed by some of their pupils.

> [A] lot of our teachers are very good at staying with kids and tutoring them. Or developing special home programs for students. If the parents are very excited about them learning French, then we've got three or four teachers who have home programs for individual students who need extra help. One of our TAs [teacher assistant] works as a tutor also. So academically we're finding that with those interventions more and more students are achieving better.

Mr. Elliott also believed that providing support to all students in the early grades could avoid the development of academic problems in the long run. He cited what is happening at Emerald School.

> Well starting at grade 1, we have the early literacy initiative. So these students right off the bat are getting all the help they need. And that's done in French, so that's improved the mast majority of kids going

into grade 2.

Ms. Clark shared what was done at her school once it was established that a student was learning disabled. She said, "From there we moved to modifying programs, differentiating instruction, and establishing IPPs [Individual Performance Profile], so that everything was documented and teachers could leave the program of studies and modify to suit the children".

The teachers at Mr. Borden's school discovered that the French immersion students had difficulties carrying everyday conversations in French. Mr. Borden and the immersion teachers decided to intervene. He described what was being done.

> So we've really been working on the adults in the school who can speak French speaking in French amongst each other, insisting that the time spent with the kids outside of English language learning is in French. Because we do recognize that they do need to develop that conversational ability. They need to develop their vocabulary and that's the only way to do it. So we've really been working hard on that.

Like Mr. Borden, Ms. Campbell talked about a concern that some of her teachers had from time to time regarding the need to develop the students' French vocabulary.

> I know I had some conversations with grade 1 teachers sometimes and they said "but our children don't have the vocabulary" or "they don't have the background" and I said "you know, well, I recognize that, so what does our job become then? How do we build that background,

how do we build a vocabulary?" But it doesn't mean we have to do it in a linear, sequential order, necessarily. Let's look at the bigger picture and what do we pull from that, and what do we have to teach and what do we have to strengthen in order to do that.

A similar focus on vocabulary improvement has been studied by Lapkin and Swain (1996). Their research has shown that targeted efforts by teachers towards vocabulary building had a positive effect on immersion students by increasing the number of words they correctly use in French.

Use of Counselors and Specialists

A few administrators mentioned that they sometimes require the help of various counselors and specialists to help them identify students with learning disabilities or emotional problems and to offer support to teachers and students.

Ms. Clark recounted what was available at her school and what was done when they felt they had exhausted all the resources they had within the school.

> We did a lot of professional development, working with teachers to help them understand how to identify special needs. And then we went through educational assessments where we were using standard tests and diagnostic programs if you will. We used the Alberta Diagnostic in English, we used COLI in French, expressive vocabulary, receptive vocabulary, test of written spelling, you know, there was a whole battery of assessment tools that we could use, and then ultimately we moved towards referral to outside people. And I think the key person, when you're in a French immersion school, the

> key outside person that you need to get to know, and hire, and marry if you have to, is the speech pathologist. Because the speech pathologist can give you an incredible amount of information about language learning. From there if we had concerns then there was the psychological assessment. And as you know, when you have a psychological assessment, the children may be coded LD [learning disabled] . . . We did get some aide time for a child who was coded severe behaviour.

Mr. Elliott talked about other difficulties that students were now facing, difficulties that have an impact on their academic success. He also gave examples of what was being done at Emerald School to assist students who had these difficulties.

> But we also are finding lately that more and more of our French immersion students have problems other than academic problems. And so we've got the [specific region] Alberta Health Initiative program working in our school where we have a counselor through Alberta Mental Health in our school. And we have made use of a district behaviour consultant who's helped the teachers worked with behaviour concerns in their classrooms.

Involvement of Parents

All the principals interviewed felt that a key to their students' success was the due to the involvement of the parents. These views are supported by many researchers (Bell, 2001; Bushman et al., 2001; Cawelti, 2000; Gullatt & Lofton, 1996; Krajewski & Sabir, 2000; Scheurich, 1998; Williamson, 1995) who point out how parental

involvement has positive effects on students' achievement in school. The administrators cited two important areas of involvement for parents in their school: instructional support for teachers and fundraising.

Instructional Support for Teachers

Many respondents related how they enjoyed having parents in the school and engaged in all kinds of activities that would support student learning. Ms. Clark conveyed how proud she was of having many parents volunteer their time, energy, and expertise at Carnelian school.

> We had extensive volunteerism in the school, both informally and formally. Formal programs included a grandparent program, where we had French-speaking seniors from a neighbouring seniors' complex and church come to the school to read with the children. And that met the needs of the children and the needs of the students by the way. We had the P.A.L.S program which was a peer-assisted learning program. And that's when we had parents who spoke French or English come in to work with the children. Some of the parents volunteered to do cut and paste. They were doing lunch room supervision program, they would drive for field trips, they would cut, they would paste, they would staple, they would laminate, they would duplicate. You name it, they did it. But I have to say that the volunteerism in that school is...or was huge. And that's key. They were extremely supportive in every way.

Krajewski and Sabir (2000) commented that having parents read to children was a strategy used in their school to help students and develop closer ties with parents. They stated, "[w]e also created a book club in which parents and children read together at school twice each month at times convenient to parents" (p. 46).

As well, Ms. Clark recounted how the parents of her school were open to suggestions regarding modifications to the school calendar in order to allow teachers more days of professional development.

> And we had to negotiate with the parents because whenever you're modifying the school year or the school day you have to take it to your parents. And they fully embraced it. They thought it was a terrific idea. So time banking was one idea where we got 10 half days, initially, to do professional development. Now 10 half days got a little choppy, so the parents found, and so the second year we turned that into five full days.

Mr. Borden shared how at his school parental involvement tended to be more prevalent in the lower grades than in the upper grades.

> Like any school it's probably more so in the younger grades. So in kindergarten everybody who can pretty well is involved. Grade 1 [parents are] still very involved. It tends to diminish until by the time you hit grade 6 the parents are in for the fieldtrips and if the teacher makes a specific request for a parent to read with the kids, or not.

However, he also added, "[T]here's other parent volunteers who are just in all the time, whether it's in the library, the classroom, whatever".

Some administrators also mentioned how they were able to use the French language skills that some parents had. For example, Mr. Diefenbaker said, "[T]hey're involved, for example, with Carnival, with special activities where we need them to speak French. We've got some French-speaking parents coming in and helping their kids read, or helping groups of kids read".

Ms. Campbell conveyed how the French-speaking parents were helping students learn French at her school.

> [T]he teachers certainly knew who the parents were that had a French background. And so they would use them in volunteer situations, whether it was reading with the children or working directly with the children, and did make use of them…

Mr. Abbott described how parents at his school were eager to get involved at home in their child's learning and how they were concerned about how they could be helpful when they themselves did not understand French.

> [T]here would be very, very few parents that would speak French. And this was question number one: "How do I help my child?" when it comes time to, grade 6, for example. "How do I help them with their math or their science. Or whatever?" And I, you know, come back, "You can help them with the concept and the understanding of what it is, they can do the translation." Which is a pretty high level skill anyway, but once you tell them how to do it in English, you know you add these numbers, you do…they can then go ahead…

Furthermore Mr. Abbott explained what he did when parents of struggling children wanted to help at home.

> [T]he student might have some difficulty in math. And the parent says, "What can I do to help?" Well I could give them the English textbook for the parent at home. The child may not be able to fully translate what's in the question, but the parent could read it and say, "well here's how you do it. I know that, I can read it now." And so it was, I think, an important thing to keep the book the same in both English and French . . . And that allowed the parent to feel, "I've got some ownership here, I can actually help my child."

Fundraising

A few principals pointed out that parents were involved in fundraising efforts. The respondents gave examples on how the money raised was used to support learning activities.

Ms. Campbell mentioned that parents in her school were committed to helping the teachers in their efforts to develop professionally. To help teachers absorb the cost associated with attending certain workshops or buying certain resources she said that, "[O]ur school council provided each staff member with 100 dollars".

Mr. Elliott revealed how the parents participating in school council meetings support student achievement.

> And we talk about achievement...student achievement with parents at school council meetings. Also the school council executive and I meet regularly and we discuss how the parent council can be involved in

promoting student achievement . . . Well the one thing that we've done this year is we've...the parent council has budgeted a large amount of money towards achievement awards. And so they recognize that achievement is very important, and they want to recognize that with the students. So they budgeted quite a lot of money this year for that. So they do fundraising for that.

Williamson (1995) raises the importance of engaging the school community in the promotion of student achievement. He states that, in high achieving schools, principals involve "the school community – staff members, students, and parents – in studying and addressing the achievement needs of students" (p. 19).

Principal's Leadership

The administrators interviewed felt that they have made decisions and improvements to their schools that contributed to the students' high level of achievement. They cited decisions that impacted the delivery of instruction and the school's culture, philosophy, mission, climate, and goals. Their beliefs are supported by several studies that revealed how principals can affect student achievement through the decisions they make as leaders (Bamburg & Andrews, 1990; Bista & Glasman, 1998; Brewer, 1993; Bushman et al., 2001; Eberts & Stone, 1988; George, 2001; Glidden, 1999; Gullatt & Lofton, 1996; Heck & Marcoulides, 1990; Leitner, 1994; Pavan & Reid, 1994; Williamson, 1995).

For example, the study by Hallinger et al. (1996) demonstrates a statistically significant relationship between principal and school climate variables, which had a positive effect on students' reading achievement. They write:

> [A]dditonal causal linkages were revealed between school context variables and the school climate variables. This model revealed a statistically significant ($p < .01$) positive relationship between principal leadership and the school climate variables. Specifically, the model indicates a strong relationship between the degree of instructional leadership provided by the principal and the existence of a clear school mission. A clear mission, in turn, influenced student opportunity to learn and teachers' expectations for student achievement. This constellation of instructional climate variables had a positive subsequent effect on student achievement in reading ($p<.05$). (p. 543)

Delivery of Instruction

The principals related that, in their schools, the teachers were either involved in the decision-making process that lead to instructional changes or were presented how the students would benefit from the changes and were asked to make the changes. Consequently, the teachers at the various schools were responsible for the implementation of most of the instructional changes.

Mr. Abbott wanted to make sure that the students in his school received excellent instruction in science. To help the teachers cover the science curriculum at every grade, he explained some of the solutions he implemented.

> One of the things that we did again that's a little different than some of the schools, science as you know, we have five units to cover in each of the grade levels, and virtually every school these days, with

> the funding the way it is, has difficulty trying to make a class without having, somewhere in the school, combined classes. If you're the teacher of a combined class, you try to provide 10 science units? That's not possible. It is…because it's a hands-on science program, and particularly if you're doing the water in this part of the room and the electricity in the other, you know. "Where's this wire go, Teacher?" You know, "stick it in the jug of water here." … Now, what I did for science was a little different: how do you deal with this combined class? Well, we would utilize another teacher in there. If we had a one/two [class] for example, we'd have the regular teacher that was teaching the one/two take the grade ones and I've have another teacher come in and take the grade twos just for science. And sometimes if we had the combo of a one/two and a two/three, we'd put the two parts of the grade 2 together depending on the numbers, and two small groups over here. Found that that didn't utilize a whole lot of additional time, but I think it did achieve a very good result in terms of science.

Besides using another teacher to temporarily group the students according to their grade and teach them the appropriate science units, Mr. Abbott related another solution used at his school.

> How do you accommodate the teaching of science? And having been an ex-science consultant we pushed for years to get packaged materials so that the teacher is not chasing all over the school at their

noon hour looking for a test tube, two beakers and a piece of charcoal and they can't find the charcoal so that science experiment's out the window. We kitted the units together, you take that to your room for the X number of weeks that you're going to do that unit, and when you pick up that box or boxes, everything that you're going to need for your class is there. So you pull it out and you go through the experiments that you're going to do and the learning skills that are necessary.

Mr. Borden described a similar approach to science in his school.

[W]e do have the "Partners in Science" program, which means that the kids are working with pre-set kits. The kits come in and it's all hands-on stuff, so it's a hands-on approach to science and it's been just wonderful for the kids.

Ms. Campbell commented on how she insisted that her teachers and herself reflect on their practice and search for new ways to challenge the students by changing the way they were instructed.

So to present the material in different ways, but also to encourage children to represent their understandings in a variety of ways . . . I know a big pet peeve of mine is worksheet after worksheet after worksheet. And to move away from that . . . And I think it has to do with all of us, and I include myself in this, we have to continue to be extremely reflective about the work we do, and ask ourselves why are we doing it...what are we doing and why are we doing it? And is it

> meaningful to children, because if it isn't, what's the point? And there's great challenges in that, absolutely. And I found in a lot of French immersion classrooms, and I'm not necessarily talking about [Carnelian School], but the instruction seems to be...and correct me if I'm wrong, you probably have a better handle on this than I do, but it tends to be fairly prescriptive and fairly rote to a degree . . . And I think that, well, whether it's French immersion or English I think we need to do a better job of moving the learning experiences into more of an inquiry approach, regardless of the language. I think [it's] one of the things that I brought to [Carnelian School] …

Alberta Learning's Handbook from French immersion administrators (2002) addresses this important concern of Ms. Campbell. This handbook states that teaching strategies should include "the use of task-based, authentic activities that are meaningful, contextualized, and involve the real transfer of information" (p. 24).

Mr. Abbott pointed that one of the difficulties facing French immersion teachers was to find adequate resources in French to implement new programs of studies. While waiting for the French translation of prescribed books to be completed, teachers would often be faced with the task of translating material to be able to properly teach certain concepts. To help his teachers, Mr. Abbott "tried in some respects to cover classes and give teachers a little bit of an opportunity to do some of that [translating]".

Ms. Clark recalled how she used teacher professional growth plans to improve student learning before they became part of the provincial expectations for teachers.

> The other thing that's come through the [school authority's name] and

> through Alberta Learning is the notion of teacher professional growth plans. Now I was doing those at [Carnelian School] before they were mandated, except I called them "Fireside Chats". OK? And in that situation I would meet with every teacher at the beginning of the year to talk about their short-term goals, their three-year goals and their long-range goals. And that meeting I think aligned the teacher's personal/professional development with school improvement planning. And that's a powerful combination, because the whole herd is heading west, if you will.

School's Culture, Philosophy, Mission, Climate, and Goals

Many respondents conveyed that the decisions they made related to the development of a school culture, the creation or clarification of a school philosophy and mission and the setting of goals played an important role in the academic success their students were experiencing. They also felt that these decisions improved the school climate, which became more conducive to student learning and student success.

> Alberta Learning (2002) points out the importance of creating a school culture. School administrators have a responsibility to create and nurture a school culture that supports the goals of the French immersion program. The school's vision, mission and belief statements as well as planning documents must recognize second language learning as a vital component of a high-quality education and reflect the value and needs of the French immersion program within the school community. The process by which these documents are developed

should include the broadest educational philosophies and allow all stakeholders to have ownership. (p. 62)

In his study, Lemire (1989) talks about school climate and reports that administrators "felt it was their responsibility to ensure cooperation and harmony in their schools either by developing a team approach, by organizing sharing sessions among staff or by promoting joint school activities for both immersion and non-immersion students" (p. 43). Day (1990) and Lamarre (1994) state that, in schools where the climate was described by teachers and administrators as being excellent, there was a lot of professional interactions between the teachers of the two programs.

Ms. Clark shared the process that she called "school enhancement planning" and that she used at Carnelian school to build consensus among the stakeholders in order to foster student success.

> [W]e actually sat down with students, with staff, and with parents to outline what our mission was, what our vision was, what our beliefs were. And then we set specific goals and determined an action plan. So our work was purposeful and we had an intent as we moved forward through the year.

Mr. Elliott maintained that, even if his school offered two different programs under one roof, it functioned as one school. He described how this was achieved under his leadership. He said,

> "Well one of the things that we've worked on especially here is unifying the staff around a common school philosophy . . . Our philosophy is this is *a* [italics added] school, not two separate schools

. . . We're all here together, the kids have to be on the playground together, so all ~~of~~ our problems are school problems".

Mr. Diefenbaker conveyed the importance of having a positive school climate where all students can enjoy themselves and be together.

> Just the school climate as a whole I think is very positive. And so there's a caring or a nurturing environment that we want to create for not only the French students but also the English students. And we also have quite a bit of fun too, so I think that is important as well. That whether it's Carnival or whether it's junior high fun day, or whether it's some field trips. So those all contribute.

Mr. Elliott revealed that having cultural activities for the whole school was crucial to the development of a common school culture and of a positive school climate.

> The one main cultural activity that we have the school participates in is our Winter Carnival, and so there's a week long Carnival theme, so the other kids in the school see that that's an important part of our school. And they welcome that also.

Half of the principals in this study declared that, when they are setting goals for their school, an important area that they are focusing on is student achievement. They expressed that they are looking with their teachers at students' results on provincial achievement tests or other classroom assessments because they wanted their students to achieve high results. Mr. Diefenbaker summed up his belief when he declared that he expects a high "academic performance" from his students.

The importance of setting clear educational goals has been demonstrated by

Brewer (1993) who discovered that "principals with academically oriented goals who transmit these to their teachers are likely to have the most impact on student achievement" (p. 282).

The use of student achievement data to identify student needs and set goals is another tool that has been mentioned in a few studies (Bushman et al., 2001; George, 2001). George writes, "In the most effective schools, skilled analysis of student achievement data has become a crucial step in breaking through the barriers of low achievement and low expectations" (p. 29).

Mr. Borden specifically talked about how the school staff uses the students' results on provincial achievement tests as a tool to find the students' strengths and weaknesses and to determine if the focus of the classroom instruction should be changed.

> Well, we look at out results every year. And we do go over them and see where we need to re-focus, what we're doing well at and what we need to achieve at. I think one conscious decision was...from the very beginning looking at the difference between our grade 3 results and our grade 6 results. The grade threes weren't particularly good at the basic skills portions of the test, and this was before the timed-test time [Part A – Timed Number Facts]. But they weren't particularly good on those portions of the test, they did better on the problem-solving [Part B], and so I never really saw this as an issue, particularly when those very same kids were doing well on the whole test by the time they hit grade 6. So I think our focus from the beginning was on more

the problem-solving type things . . .

Similarly, Mr. Elliott explained how, as a school, they look at their students' results on provincial achievement tests and plan what needs to be done to help the students achieve excellent results.

> Well as a staff we focus on student achievement. We want the students to achieve very well, and there's a lot of intervention on my behalf with the staff. I sit down at the beginning of the year and discuss the term plans with the teachers. We have a separate meeting to discuss their personal growth plans. I meet with them twice a year to discuss student achievement. As a staff we discuss the achievement tests and make appropriate plans for them.

Table 5

Summary of Main Themes and Sub-Themes That Emerged from the Interviews

Main Themes	Hiring Quality Teaching Staff				Having Good Relations Between Teachers			Support for Struggling Students			Involvement of Parents		Principals Leadership	
Sub-Themes / Principals	Knowledge of the Curriculum	Good Teaching Practices to Use With Children	Ability to Communicate Effectively in French	Having High Expectations	The Language Spoken Among Teachers	Equity Between the Programs	Communication Between Individuals	French Learning Assistance Programs	Modifications to the Delivery of Instruction	Use of Counselors and Specialists	Instructional Support for Teachers	Fundraising	Delivery of Instruction	School's Culture, Philosophy, Mission, Climate and Goals
Mr. Abbott	✓		✓	✓	✓	✓	✓		✓		✓		✓	
Mr. Borden	✓		✓		✓				✓		✓		✓	✓
Ms. Clark		✓	✓					✓	✓	✓	✓		✓	✓
Ms. Campbell	✓	✓	✓	✓			✓	✓	✓		✓	✓	✓	
Mr. Diefenbaker		✓	✓	✓	✓						✓			✓
Mr. Elliott	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓

Principals' Perspectives, Reflections, and Explanations: Common Threads

The previous section of this chapter focused on the reasons given by the principals of the five selected schools to explain why their immersion students had achieved better results than most immersion students on the various grade 6 provincial achievement tests written in French.

This section will address some of the specific questions that stemmed from the research problem of this study. They are:

1. Which model of French immersion instruction delivery (immersion centres and dual-track or multi-track schools) allows its students to achieve the best results on Alberta's provincial achievement tests? How can this be explained?
2. What core subjects show the greatest difference between the students in immersion centres and the immersion students in dual-track or multi-track schools? How can this be explained?
3. What core subjects show similar achievement levels between the students in immersion centres and the immersion students in dual-track or multi-track schools? How can this be explained?

During the interviews, the administrators were presented with a summary of the quantitative results that are in the tables laid out in Chapter 4 of this study. The principals were asked to explain why students enrolled in immersion centres achieved better results than immersion students attending dual-track or multi-track schools on the various grade 6 provincial achievement tests written in French. They were also invited to give their insight as to why the difference in achievement favouring students from

immersion centres was the greatest on the social studies test and the least on the French language arts test.

Based on interpretational analysis of the data, themes emerged from the principals' perspectives, reflections, and explanations. Each theme was connected to a specific research question. Then, the themes were grouped under a heading that reflected the answer to each research question as revealed by the quantitative results gathered in this study. The heading are: (a) immersion centre students achieve the best results, (b) social studies: greatest achievement gap; and (c) French language arts: smallest achievement gap.

Immersion Centre Students Achieve the Best Results

Three themes surfaced from the principals' comments when they were asked to explain why students enrolled in immersion centres had better results on the various grade 6 provincial achievement tests written in French than immersion students attending dual or multi-track school (See Appendix C, Question 13). These themes were:

- immersion centres function like Francophone schools;
- common goals and resources directed at one program are best; and
- parents' characteristics.

Immersion Centres Function like Francophone Schools

Many administrators considered that immersion centres functioned like Francophone schools. They believe that this similarity would be key to the higher levels of achievement of the students in immersion schools on the grade 6 provincial achievement tests. The principals' impressions were sustained by the findings of Lapkin

et al. (1981) that point out specific contexts where immersion centre students spoke more French than dual-track school students. These contexts were: "when speaking to classmates out of class and to other students in the school, and when speaking to members of the staff other than their homeroom immersion teacher" (p. 79). Lapkin et al. conclude, "These results thus provide some indication that there may be, on average, more French spoken by immersion center students in certain out-of-class contexts than in dual-track schools" (p. 79).

Mr. Diefenbaker gave an example of what he saw in an immersion centre he visited and that relates to the findings of Lapkin et al.

> And my perception of that school was that it was very much...almost a Francophone school, rather than a French immersion school. Now that was quite a few years back, but the teachers all spoke in French and, because there was no English kids, that the kids spoke French on the playground and it was much more of a French environment.

Ms. Campbell used a personal example, recalling the time she lived in Germany, to show how it is important to be in an environment that immerses you totally in the language you learn.

> [W]e had friends of ours who are from Greece, and they lived right in the community, . . . she had to do all her business in German, and doctors and dentists, and everything you needed, she was forced into it. So I would think that that would be very similar in a setting that we have. And just like any child learning a second language, when we have children from other countries coming into our schools, they're

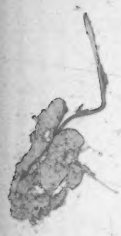
going to learn the language of the playground probably before they learn the language of the classroom, because they need it, they hear it, they're playing with children, and they're completely and totally immersed in it.

Mr. Borden talked about how students in immersion centres have more opportunities to be exposed to French and how it is difficult to make sure immersion students use French outside of the classroom in a dual-track school.

It...the kids...it's much easier for the kids to switch into English. If they're in a solely French school, it's easy to pinpoint a child speaking English. And they're going to have much more models, I mean everything they do, the announcements are in French, the assemblies are in French. Every single performer that you bring into school is in French, it's much easier to surround those kids with French. And I think there are bonuses to a dual-track thing too, that go beyond the academic, but a solely French school has those things going for it.

Mr. Borden added that being more exposed to the French language probably helped students learn and used words that are not common and easily remembered. He used examples from the grade 6 science and social studies curricula to illustrate his point.

I think probably it's more a language thing than an academic thing [advantage], and in French immersion, you know, like science for instance; a lot of it is vocabulary. When the kids are studying forests I mean, or airplanes, let's take the worst one, I mean, those horrible



technical terms that they have to learn in French like I can't even remember them in English let alone French. Those little wing flap things that...I don't even know them in English. And so you've got to learn them in French and you'll use them in grade 6 and unless you're a pilot you'll never use them again. And I remember when we were doing glacier studies, all those...ughh! Moraine and glacial till and all that stuff in French, I mean, it's very difficult. So if the kids are surrounded by the French culture I would...it's much easier.

Ms. Clark pointed out that immersion centres are better able than dual-track schools to create a French community within their walls.

Because in a French immersion school you can build that French community. Again, this is [name of the community], Alberta, we don't have a significant French population where you can explore the notion of language is culture, culture is language. And I believe that. So you develop mini-cultures in your school. And you can't do that as effectively in a dual-track school.

Common Goals and Resources

A few respondents observed that an immersion centre only houses one program under its roof which presents advantages in terms of the development of common goals for the school and the allocation of resources.

Mr. Elliott felt that the establishment of common goals was the key factor for the success of the students in immersion centres.

I would have to probably look at the common school goals as being

the reason. If you're in a single-track school obviously everyone views the school as a French immersion school whereas maybe in a dual-track school they may have separate school goals for the two different programs.

Ms. Clark believed that the allocation of resources, both human and material, was the crucial advantage of an immersion centre, because it can be more easily done when you only have to deal with one program in a school.

> One of the things that I see, again, having been in a dual-track school and a French immersion school [centre] is that you focus 100 % of your resources on French immersion. So your materials, your books, your texts, your software, French keyboards, all of that material resource, if you will, is in French. And I think the other key is the human resource. Because, as a principal in a dual-track school, if I have 30 grade 1 students, I might have 10 in English and 20 in French. Well that gives me one and a half teachers. I can't put 15 children in each room. Do you see what I'm saying? We're not staffed as multi-track in dual- or multi-track programs; we get one teacher allocation for the entire school. And what happens is that sometimes you don't have a fix or match of students to teachers, and so I think one of the keys is the human resource factor. Probably the most important.

She summed up her comments by stressing the importance of being able to properly fund a French immersion program to ensure its success.

> When you have to split your resources two ways in a dual-track program, three ways in a triple-track program, it's really hard to resource the French immersion the way we feel it needs to be resourced. So the underlying factor is money. It's budget. And if we could fund a dual-track program as a school within a school, if you will, I think some of the advantages of single-track versus dual-track would go away.

Parents' Characteristics

Mr. Abbott maintained that the main reason students in immersion centres had better results than the immersion students in dual-track or multi-track schools were the characteristics of the parents of students in immersion centres. He argued that many students in immersion centres had one or two parents who were Francophone themselves. For this reason, the students had better French language skills, which might explain why they had better results on the grade 6 provincial achievement tests written in French. He stated, " I think there is a real difference between the kids that take French immersion, which predominately in [name of a city] in our district are English-background, in the [name of a school authority that has immersion centres], many of those parents speak French. OK?"

Mr. Abbott also considered that parents who chose to send their children to immersion centres had to be more committed to the French immersion program, because the children often had to spend a long time on a bus to reach the nearest immersion centre.

> [I]n a single-track school, we would get a better population of kids

> because they're going to have to commit themselves to that program; they're going to have to travel, you're going to have to have parents that really, really want to have French immersion as opposed to "it's in my school anyway, I might as well take advantage of it." And I think when you've got [name of a school authority] you've got a lot of those sites, there's several of them in the city, 14 of them or whatever, as opposed to the [name of a school authority], where there's only a few, but the whole school is concentrated. You're going to get the people that really, really want French.

Social Studies: Greatest Achievement Gap

The respondents had difficulties explaining why social studies was the subject that had the greatest difference in achievement between the two French immersion populations (see Appendix C, Question 15). Half of the principals could not come up with a reason. The three themes that came forward in the answers given by the remaining administrators were:

- time spent teaching the subject,
- multi-age classes, and
- difficult concepts and vocabulary.

Time Spent Teaching Social Studies

Mr. Abbott mentioned that, compared to mathematics or science, social studies is a subject for which teachers do not receive as much support. He speculated that, in immersion centres, more time might be allocated to teach this subject. He illustrated his

point by citing what was done in science in his school authority and exposing the complexity of teaching social studies in French in an English environment.

> Well...social studies, I think until, social studies used to be like science was. Science was something that you did if you had a science background. Having been a science consultant I know that you could go to, even though it was spelled out in the curriculum and whatever, you could go to 95% of the classrooms and nobody taught science. Because it was too difficult and they didn't understand it and whatever. And so the teachers tended to ignore it. Since we've gone to more of a packaged form, and it's easier for the teacher - you're not developing square one again. They would tend to be able to pick that science kit up and go at it. Social studies doesn't have any of that kind of structure you can get your teeth into. And I think probably there would be less opportunity...like I mean you're studying the same kind of thing, you're studying, government is an example. You're going to go to the legislature; it's all in English. You're going to go city hall, it's all in English. You're going to have the mayor come and talk it's all in English. You know? And if you're in a single-track school, perhaps they're teaching more of it . . . That's...the teacher looks at the guide and says "need to have this many minutes, put it in" you know? Now do you teach it in that many minutes? That's the only thing that I can see that affects achievement, is time on the subject, time on task. And perhaps they're putting more time in it. Because

you see, we're...I don't know. The only thing that I can think of is time.

Multi-Age Classes

Ms. Clark described how instruction is often organized in multi-age classes. She used the example of multi-age classes as a possible reason to explain the gap in achievement between the two immersion populations.

> Another thing is that in some schools you're multi-aging in your classrooms. So the students are studying the grade 6 program in grade 5, and they are writing the exam in grade 6. Now, to me that doesn't specifically answer your question about single-track versus dual-track, but I think they may well be factors.

Difficult Concepts and Vocabulary

Mr. Elliott saw the difficulty of the concepts and of the vocabulary as the main cause of the achievement gap in social studies between the two immersion populations.

> Social studies concepts are very difficult and then there's a whole level of specialized vocabulary. Social studies is probably one of the harder tests, even in the English for kids to do well in, and it's because of the level of concepts that kids are expected to achieve at. So the concepts become difficult, and then when you add the vocabulary on top of that . . . well my daughter's in grade 6 and some of the words that she's expected to understand, I have trouble understanding them too.

Ms. Clark felt the same way about the vocabulary used in social studies. Many of her

immersion teachers have been trying to solve this problem. She said, "One thing that the teachers have been asking for is a glossary".

French Language Arts: Smallest Achievement Gap

The administrators' ideas to account for the fact that French language arts was the subject with the smallest difference in achievement were clustered (see Appendix C, Question 14). Three themes surfaced:

- language program and transferable skills,
- comfort level and vocabulary, and
- time spent teaching language arts.

Language Program and Transferable Skills

Ms. Clark thought that the nature of the immersion program was language based; therefore language teaching had to be highlighted in both immersion centres and dual-track or multi-track schools. She had two short sentences to account for the students' results being the closest in French language Arts between the two immersion populations. She said, "French immersion is a language program. Our emphasis is language".

Mr. Borden offered the transferability of skills between languages as a possible rationale for the smallest achievement gap in the French language arts results.

> I mean maybe there's crossover. In the fact that the kids are learning about reading and writing in their mother tongue. So they're learning it probably more efficiently. And then they're making that crossover into French; they're able to cross those skills over into French. So they're learning about paragraphing and about writing and about

characterization in their writing, they're learning some of that stuff in English and so maybe more efficiently and then crossing it over more efficiently. Just a guess.

Comfort Level and Vocabulary

Mr. Elliott suggested that French immersion teachers, regardless of the type of immersion schools where they were, probably felt most comfortable teaching French language arts than any other subjects. He also stated that the level of vocabulary used to teach French language arts concepts is probably not as demanding as it is in other subjects.

It's probably the subject that teachers commonly feel the most comfortable teaching. There's not the same, probably the same vocabulary demands on it, the same demands of understanding concepts you might find in, say, science for example. From my understanding, I would say in science or social studies you have a completely different level of vocabulary, and especially science you've got quite a lot of different concepts. So I would say in that area, probably teachers most universally are the most comfortable teaching that area.

Ms. Campbell considered that the higher level of vocabulary used in mathematics and science would make it logical, that in comparison to these subjects, French language arts has the smallest gap in achievement between the two immersion populations.

I'm wondering if it wouldn't be because in math or science there'd be

> a lot more jargon or technical terms that you wouldn't use in everyday language, whereas in reading and writing...I'm just guessing. You know, I thought...I would think that it's going to be...language you're going to be reading and language you're going to be writing is probably closer to the language you're going to be speaking although there's differences in that. Whereas how often do you use subtraction? Right? Or how often do you use "hypothesis" in everyday.

Time Spent Teaching Language Arts

Mr. Borden perceived that more instructional time might be spent on language arts in dual-track and multi-track schools than in immersion centres, which would explain the results.

> If you look at the difference when...because in a dual-track school you are forced to use your maximum amount of time allotted to you in language arts courses. So there may be more time spent if you add up...in a dual-track school if you add up the time we spend on English language arts and the time we spend on French language arts it may be a larger proportion of time than is spent on that in a French school.

In his opinion, dual-track and multi-track schools were possibly spending more minutes each week on language arts classes, both in English and French, than the minimum amount of time prescribed by the provincial regulations while immersion center schools might only schedule the minimum amount of language arts instruction prescribed.

Summary of Themes

The principals' conversations related to the success experienced by their immersion students on the grade 6 provincial achievement tests written in French were summed up by themes and sub-themes. The principals stressed the importance of hiring quality teaching staff and disclosed some of the specific qualities they were looking for in the candidates they interviewed and eventually hired. The respondents emphasized the importance of fostering good relations between teachers through clear, open, and effective communication. In addition, the administrators pointed out how critical it was to offer proper support for struggling students. The principals also believed strongly in the extensive involvement of parents at their school. The respondents identified some of their decisions as leaders as key to the students' success. These decisions were specifically related to the delivery instruction, to the development of clear goals, and to the creation of a good school climate.

The principals' remarks to account for the gap in achievement favouring immersion centre students were grouped by themes. The respondents believed that immersion centres functioned like Francophone schools, had common goals, could better allocate their resources, and possibly had many parents who were French and English-speaking parents who were more committed to the immersion program than parents of immersion students in dual-track and multi-track schools. Themes also surfaced when the administrators were presented with the results showing that social studies was the subject with the largest achievement gap between the two immersion populations. The principals speculated about the time spent teaching social studies, the effect of multi-age classes, and the difficult concepts and vocabulary. Finally, to explain

that French language arts was the subject with the closest results between the two immersion populations, the respondents mentioned that French like English is a language program and that students develop transferable skills between the two languages. They also cited the comfort level of the teachers with the subject area and the basic vocabulary used. Time spent teaching language arts in dual-track and multi-track schools was mentioned as well as a possible factor.

CHAPTER 6

SUMMARY, DISCUSSION OF FINDINGS, AND IMPLICATIONS FOR PRACTICE AND RESEARCH

Introduction

This chapter is divided into four parts. The first part offers a summary of the study, which includes the purpose, the method used to gather and analyze data, the findings, the delimitations and the limitations. My personal reflections are contained in the next section. Recommendations for practice constitute the third part of the chapter. The last section looks at implications for research.

Summary of the Study

Purpose

The purposes of this research was (a) to compare the results of grade 6 students enrolled in immersion centres to the results of grade 6 students attending dual-track or multi-track schools and (b) to look at the exemplary practices of the schools where the grade 6 students have achieved the best academic results. Alberta's provincial achievement tests data, over a five-year period, in the four core subjects taught in French (mathematics, science, social studies and French language arts) were used to reach the first purpose. The specific research questions addressed were:

1. Which model of French immersion instruction delivery (immersion centres and dual-track or multi-track schools) allows its students to achieve the best results on Alberta's provincial achievement tests? How can this be explained?

2. What core subjects show the greatest difference between students in immersion centres and immersion students in dual-track or multi-track schools? How can this be explained?
3. What core subjects show similar achievement levels between students in immersion centres and immersion students in dual-track or multi-track schools? How can this be explained?
4. Are there some high achieving French immersion schools that are using a model different than the one that is allowing its students to achieve the best results on Alberta's provincial achievement tests?
5. How do the highest achieving schools explain their results?
6. What exemplary practices might account for the excellent achievement results experienced by some schools?

Method of the Study

The design of this study draws on both quantitative and qualitative methodologies to establish a broad database (Gall, Borg, & Gall, 1996; Glesne, 1998; Smith, 1983) comprised of the results of Alberta's French immersion students on provincial achievement tests and of the principals' understandings of factors explaining why students in their schools achieved excellent results on these tests.

Quantitative Data

In this research, the quantitative data gathered had many functions. It served to determine if the students enrolled in immersion centre had achieved better results than students in dual-track or multi-track schools. Quantitative data was key to finding in which of the four core subjects one of the two immersion populations was

outperforming the other. Another role of the quantitative data was to identify the schools where students were achieving the best results. The quantitative data also acted as a supportive element of the qualitative methodology (unstructured interviews) of this research. The identification of the top achieving schools allowed the researcher to locate the principals that were interviewed. Finally, the quantitative data provided the researcher with questions that were asked during the unstructured interviews, which were used to gather qualitative data.

Qualitative Data

The qualitative methodology, through the use of unstructured interviews, gathered data from principals who related the reasons and the decisions explaining why their students performed very well on achievement tests. The principals interviewed were also asked to explain why one model of French immersion delivery was more successful than the other one and why the difference between the two immersion populations was greater in certain core subjects than other ones.

Interviews. The interviews were conducted in a way to ensure that the participants' answers were both valid and reliable. The interviews were carried out in late Spring 2001. In all but one case, the interviews took place at the participant's current school, in a comfortable setting that encouraged the respondents to share their experiences. One interview was conducted after work hours in a small conference room at the researcher's workplace because the principal had retired at the end of the previous school year.

The six administrators were from five different schools belonging to four school jurisdictions and their administrative experience ranged from three to over 15 years,

with two principals having been administrators of a school with a French immersion program for more than 10 years. Four respondents were male and two were female. The participants ranged in age from the late thirties to the mid fifties.

Analysis

The tables produced using quantitative data from the Alberta provincial achievement testing program were studied to identify which model allowed immersion students to achieve better results. The school results of each immersion school in Alberta were combed to identify the top 10 achieving schools. The audiotaped interviews were transcribed. Interpretational analysis was the method used to look at the transcripts in order to find answers to the specific research questions. From this analysis, themes surfaced from the qualitative data assembled.

Trustworthiness of the data. To ensure trustworthiness of the data analysis, several methods were used to justify credibility, transferability, dependability, and confirmability as explained by Guba and Lincoln (1985). These methods included: (a) peer debriefing with colleagues who had extensive knowledge of French immersion schools; (b) detailed descriptions of the five schools, their staff and student bodies as well as their school community, (c) the use of numerous direct quotes from the participants to support findings, reduce any unintentional bias, and ensure transferability; (d) the opportunity for principals to review copies of the transcriptions so they could add, delete or clarify parts of the transcripts, and (e) the creation of a logbook that took the form of a journal in which experiences, ideas, concerns, and personal reflections were recorded.

Findings

An analysis of the quantitative data (see Chapter 4) and of the qualitative data (see Chapter 5) suggested findings related to the six research questions.

Which Model of French Immersion Instruction Delivery Allows its Students to Achieve the Best Results on Alberta's Provincial Achievement Tests?

In Chapter 4, the results of the calculations of the difference between the Total Test Mean showed that, for the four subjects tested in French (in the categories observed during the years used for this study), students enrolled in immersion centres were achieving better results in all of the subjects, for each of the years that were used for this study. Furthermore, the difference between the means of the two immersion populations have been steadily increasing in all of the subjects between the 1997-1998 school year and the 1999-2000 school year. Only in the 1996-1997 school year was the mean of the dual-track and multi-track immersion students on the French Language Arts test superior to the mean of students in immersion centres (see Table 1).

When the principals were asked to explain why French immersion students enrolled in immersion centres had better results on the various grade 6 provincial achievement tests written in French than immersion students attending dual or multi-track school, their comments revolved around three key topics. The principals believed (a) that immersion centres functioned like Francophone schools, (b) that having common goals and resources directed at one program played a key role in student achievement, and (c) that parents of immersion centre students had different characteristics than parents of other immersion students.

What Core Subjects Show the Greatest Difference Between Students in Immersion Centres and Immersion Students in Dual-Track or Multi-Track Schools?

The quantitative data displayed in Chapter 4 (see Tables 2 to 4) show that achievement on provincial tests for three core subjects studied (mathematics, science and social studies) was showing the greatest difference between the two French immersion populations. The Difference in Total Test Mean clearly shows that students enrolled in immersion centres are achieving better results than immersion students from dual-track and multi-track schools. Social studies is the subject where this difference has been the greatest over the 5 years explored in this study.

The principals were not able to give many explanations as to why social studies was the subject that had the greatest difference in achievement between the two French immersion populations. Half of the respondents could not come up with a reason. The few answers given were related to (a) the time spent teaching the subject, which might not be sufficient in many schools, (b) the number of multi-age classes in dual and multi-track schools where the grade 6 social studies topics are sometimes taught when students are in grade 5, one year before the achievement test is administered, and (c) the difficult concepts and vocabulary that are inherent to this specific subject.

What Core Subjects Show Similar Achievement Levels Between Students in Immersion Centres and Immersion Students in Dual-Track or Multi-Track Schools?

Table 1 in Chapter 4 shows that French language arts is the subject that has the smallest gap in achievement between the two French immersion populations over the 5 years of this study. French language arts is the subject that has the least difference in Total Test Mean results between the two immersion populations.

The administrators had several explanations to account for the fact that the smallest difference in achievement was found in French language arts. They mentioned that French, like English, is a language program and that many basic skills are transferable between the two of them. Therefore all immersion students, regardless of their immersion setting, would receive similar exposure to basic transferable language skills. The principals also stated that most immersion teachers experienced the greatest comfort level when they were teaching French language arts. The similar vocabulary used in all immersion classes to teach French language arts and the same amount of time spent teaching language arts were two other factors discussed by the principals.

Are There Some High Achieving French Immersion Schools That Are Using a Model Different Than the One That Is Allowing its Students to Achieve the Best Results on Alberta's Provincial Achievement Tests?

The type of quantitative data used to determine the top 10 schools where the French immersion students achieved the best results on provincial achievement tests were school results. Each immersion school was ranked according to its students' results using a method explained in Chapter 3. It was discovered that most of the high achieving schools are delivering the French immersion program using the model different from the one that has allowed immersion students to achieve excellent results on provincial achievement tests. Out of the top 10 achieving schools identified, eight were dual-track schools and two were immersion centres. The standard deviations presented in Table 1 to Table 4 help explain why the spread between the high achieving and the low achieving immersion students is greater in dual-track and multi-track schools than in immersion centers. This also helps explain why more dual-track schools

are among the top 10 schools. Looking at the standard deviations, it could be construed that several dual-track and multi-track schools could be among the 10 schools with the lowest level of achievement.

How Do the Highest Achieving Schools Explain Their Results?

What Exemplary Practices Might Account for the Excellent Achievement Results Experienced by Some Schools?

Findings pertinent to the last two research questions are grouped together since the answers given by the principals to explain their school results were illustrations of exemplary practices.

Interpretational analysis was the method used to study the interview transcripts and to organize the findings into themes. Five main themes surfaced from the analysis of the interview data. Each main theme was also divided into sub-themes.

First, principals stressed the importance of hiring quality teaching staff. The sub-themes were the qualities and attributes that administrators were looking for in their teaching staff. These qualities and attributes included: (a) a strong knowledge of the curriculum, (b) good teaching practices to use with children, (c) the ability to communicate effectively in French, and (e) having high expectations.

The second theme that emerged was having good relations between teachers. The principals explained that there were good relations between teachers in their schools because the language spoken among teachers was mostly English, there was a feeling of equity between the immersion and English programs, and there was open communication between individuals.

Support for struggling students is the next theme that came into view. The administrators' comments led to the creation of sub-themes dealing with the absence of targeted support in certain cases, the use counselors and specialists, modifications to the delivery of instruction, and the presence of French learning assistance programs in some schools for students who experienced academic and behavioural difficulties.

Then, the involvement of parents arose as a theme from the interview data. The principals cited two important areas of involvement for parents in their school: instructional support for teachers and fundraising.

Finally, the principal's leadership was the last theme to surface. The respondents named decisions that they made as leaders to improve student achievement. These decisions revolved around two sub-themes: changes to the delivery of instruction and attention paid to the school's culture, philosophy, mission, climate, and goals.

Delimitations

In this study, Alberta provincial achievement tests' results of students in immersion centres were compared to those of immersion students in dual and multi-track schools. It is possible that different results could be found in other provinces and countries where immersion programs are found.

Even though the six Alberta principals included in this research described exemplary practices they adopted to help their immersion students achieve the best results on provincial achievement tests, their methods may not reflect the practices of other high achieving schools in or outside Alberta.

Furthermore, the influence of direct classroom instruction on student achievement was not explored in this study.

Limitations

Most limitations are linked to the researcher and the principals interviewed. It is possible that the level of awareness of the principals regarding the range of practices that influence student achievement as well as their ability to recall the practices they use might have influenced the findings and their transferability. The researcher may also have been unable to completely comprehend the principals' comments, which possibly might have caused inaccurate interpretations of the respondents' interview data.

Another limitation may be linked to socio-economic status of the French immersion students who attended the schools included in this study. The principals described the families of the students in their schools as high socio-economic status families who could be designated typical middle or upper middle class. It is possible that the students attending the French immersion schools included in this study are coming from families that have a different socio-economic status than the other immersion students in the province of Alberta.

Personal Reflections

This study has demonstrated that grade 6 students in immersion centres are performing better than dual-track and multi-track immersion students on provincial achievement test written in French. Even though the principals of dual-track schools who participated in this study mentioned that it was beneficial for their English students to be exposed to French cultural events, I kept wondering how beneficial it was for immersion students to be only exposed to a limited number of French activities outside of their classrooms due to the fact that the presence of students from another program would mean that English was used within the corridors of the school and in the other

activities. In other words, were the immersion students exposed to French less than they could have been due to the presence of their English counterparts?

Another reflection that came to me was tied to the fact that the principals were pleased to mention that the good relations between all staff members, regardless of the program they were teaching, were key to the academic success of their students. These harmonious relations were developed partly because teachers were using the same language most of the time when they were in the staff room. A few administrators revealed that courtesy dictated the use of English as a common language when teachers were informally congregating. It was also stated that tensions would sometimes develop when it was felt that French was used too often or too much among some staff members. Interestingly, Lamarre (1989) and Lemire (1989) conveyed similar results in their research. However, it is puzzling to note that principals in dual-track schools continue to struggle to find a balance between the need for French immersion teachers to practice their language skills and the need to maintain harmonious relations among staff members. Deeper issues related to the affirmation of one's cultural identity and to the dominance of one culture over the other might be at play when clashes occur between teachers in dual-track and multi-track schools. These deeper issues might also explain why the recruitment of qualified immersion teachers continues to be problematic.

For instance, even though French immersion programs have been in place in Alberta for over 30 years, it appears that qualified teachers who possess both sound pedagogical skills and strong French language skills continue to be difficult to find and to retain as staff members. The principals in this study all agree that having sound

pedagogical skills is the most important criterion they look at when they hire a French immersion teacher. However, they are divided as to what they decide to do with candidates with sound pedagogical skills, but who have French language skills that are not as perfect as can be. Many principals declared that they hire their French immersion teachers on the basis that they can communicate well in English. They perceived this as contributing to the development of good relations between staff members. The quality of their French language skills was of secondary concern to them. Other principals felt that they would have difficulties hiring an immersion teacher who did not have a solid grasp of the intricacies of the French language. This lack of consistency between administrators would possibly cease to exist if the French language skills of future immersion teachers could be further developed while they were still undergraduate students.

It is interesting to note that many principals believed that harmonious relations between staff members hinge on the use of one unified language in the staff room. It appears that issues of trust and respect between colleagues have to be proactively and continuously addressed by the school administrators to make sure that tensions do not develop among staff members. Perhaps principals of dual-track and multi-track schools might need to worry less about the language spoken among colleagues if the entire staff would work toward, if not adopt, common goals and a mission that includes values of trust and respect of diversity, values that they would strive to model constantly.

This issue related to the language spoken among colleagues is certainly going to have an impact on my own personal practice. Even though I am not presently in a school, I am leading and supervising both people who are working in French and people

who are working in English. This bi-cultural context is similar to the context principals of dual-track and multi-track schools face. Furthermore, in my line of work we have common goals and objectives to attain as a group. For these goals and objectives to be reached I, like the principals I interviewed, have to mediate and negotiate and make sure that staff members in my work unit feel that they are part of a strong team, are involved in the decision-making process, and are working in a safe and caring bi-cultural environment. This research has increased my personal awareness of the importance of (a) recognizing, promoting, and respecting the cultural diversity of staff members, and (b) ensuring that they continue to develop their language skills, as they impact the quality of the tests they create, using French and English.

Implications for Practice

The findings of this study have raised some points that have implications regarding the exemplary practices that appear to foster student achievement and the immersion delivery model that seems to allow students to be more successful when learning the French language. These implications for practice have been listed below to ensure conciseness and clarity.

1. School authorities who use the dual or multi-track schools model must develop a funding system that makes it easier for principals to allocate resources according to the needs of each program in the school without having to short change any of the programs.
2. In light of the fact that the immersion centre model allows its students to achieve better results on provincial achievement tests, school authorities must ask themselves how important it is for them to provide the best setting for their

immersion students to achieve the best results and to allow them to develop the best French language skills possible.

3. School authorities should provide adequate support in the French immersion schools for the struggling immersion students in the form of either French language specialists or French resource rooms in order to help them become successful without having to automatically transfer to the regular English program.
4. Principals are often facing the difficult task of recruiting immersion teachers who either have excellent pedagogical skills or excellent French language skills, as it seems that there is a limited number of candidates who possess excellent skills in both areas. It is crucial that the institutions instructing future immersion teachers ensure that the skills of their students are well developed in these two key areas.
5. To ensure that immersion students achieve excellent results, principals must hire quality teachers who have a strong knowledge of curriculum, and who have high academic expectations.
6. French immersion administrators in dual-track and multi-track schools must be given more professional development opportunities to help them tackle the daily challenge of leading a bi- or multi-cultural staff, of promoting and respecting the cultural needs of teachers from various programs, of building and maintaining team spirit among colleagues, and of working toward the realization of their school goals.

7. In order to avoid unnecessary tension related to the use of a language other than English during informal conversations between staff members, principals of dual or multi-track schools must continuously nurture values of thrust, caring, openness, and goodwill possessed by the people they supervise.
8. Principals who want the achievement of their students to improve must also emphasize the importance of achievement by incorporating it in their school culture, goals and philosophy, by seeking the help of parents, by allocating resources towards that goal, and by modifying instruction when necessary.
9. Principals of dual-track and multi-track schools must ensure that, despite the fact that more than one program is delivered to the students in their building, all their school processes and staff decisions reflect and demonstrate to the students and stakeholders that the school functions truly and effectively as one school.
10. Through their actions and decisions, principals must demonstrate to the staff, students, parents, and other stakeholders that they value and strongly believe in the importance of learning a second language, in this case French.
11. Principals ought to promote grade level collaboration between teachers of different programs.
12. Principals must ensure that the delivery of instruction in multi-age classes is supported and organized in such a way that outcomes of the various programs of studies are presented as much as possible when students are developmentally ready to deal with them.
13. School authorities that support the creation of multi-age classes, even when sufficient number of students exists to have full grade classes, might want to

study further the impact of such classes on the wellness of their teachers and on student achievement as they are adding instructional challenges.

14. In light of the findings suggesting that the use of English helps to maintain harmonious relationship among staff members in dual-track and multi-track schools, the issues related to the quality and the preservation of the French language skills of French immersion teachers need to be acknowledged and addressed by principals and superintendents.

Implications for Research

The findings of this study shed some light on the difference in achievement between the students in immersion centres and immersion students in dual-track and multi-track schools. As well, it provided insights on exemplary practices that were in place in the immersion schools that had the students with the best results in Alberta on the grade 6 provincial achievement tests written in French. The implications for research that are listed in this section originate from the findings of this study. In addition, other observations have arisen that are not directly tied to the research questions explored in this study. However, these observations may lead to future research and therefore have also been be included with the implications for research listed in this section.

The principals of dual-track schools who were part of this study mentioned the importance of having their two programs, their entire staff, and their student population work homogenously as one school. Although a lot of research has been conducted on school effectiveness, immersion schools have not been exclusively studied under this specific light. Since French immersion is a program of choice that has particular needs,

it would be beneficial to see if the findings on school effectiveness apply to the French immersion reality, and especially to the French immersion reality that is housed in a building offering more than one educational program.

In order to continue to develop a better picture of how French immersion schools can help their students improve their level of achievement and how the program can be delivered more effectively, additional research on the following topics need to be undertaken.

1. Research on effective schools targeted at immersion schools.
2. The perceptions of the immersion teachers of the elementary schools that have students with the best achievement tests results on the exemplary practices they adopt to help students achieve excellent results.
3. The comparison of achievement test results on the core subjects taught in French of grade 9 immersion centre students to the achievement test results of immersion students in dual-track and multi-track schools.
4. The perceptions of parents of immersion students on the reasons explaining the effectiveness of their children's school.
5. The difference between parents of immersion centre students and parents of dual-track and multi-track students.
6. The comparison between the perceptions of immersion parents on the difference between results of students in immersion centres and results of immersion students in dual-track or multi-track schools.

7. The comparison of achievement test results of immersion students in multi-age classes to the achievement test results of immersion students in single grade classes.
8. The comparison of student achievement between dual-track and multi-track schools that have a small immersion population and the ones that have a large immersion population.
9. The comparison of achievement results between the regular English program students and the immersion students in the top achieving dual-track and multi-track schools.
10. The comparison of the achievement results of immersion students in multi-track schools to the achievement results of immersion students in dual-track schools.
11. The reasons why there is a widening gap in achievement between students in immersion centers and immersion students in dual-track and multi-track schools as presented in this study, and the reasons why it is at its greatest in the 1999-2000 school year.
12. The comparison between the parents of the top achieving French immersion schools and the parents of the low achieving French immersion schools to see if they have similar socio-economic characteristics.

While it is wished that this study will contribute to unveil some of the differences in achievement that exist between students in immersion centres and immersion students in dual-track and multi-track schools and some of the exemplary practices that are in place in the schools that have their immersion students achieve

higher scores on provincial achievement tests, a larger body of research still needs to be developed in these specific areas.

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APPENDIX A

PARTICIPANT CONSENT FORM

PARTICIPANT CONSENT FORM

Graduate Research Project
Department of Educational Policy Studies
University of Alberta

I, _____, understand that I have been invited to participate in a research project that will be used by the researcher to write a thesis to complete the graduate requirements to obtain a master's degree from the University of Alberta. The project purpose is to explore the current school contexts and administrative practices of a few selected French immersion schools in order to determine if they have an impact on the Provincial Achievement Tests results of its students.

I understand that my participation is voluntary and that I have the right to withdraw from this project at any time. Quotes from my interview will be used in the writing of the researcher's thesis.

I will be asked to participate in an interview lasting approximately 60 minutes. The interview will be tape-recorded and transcribed. All transcripts and tapes will be kept secure for a period of 5 years following the completion of this research and then will be destroyed.

I will be given an opportunity to validate the transcripts and remove or change any portions that I wish.

The project findings will be incorporated in a thesis. Secondary uses of the findings may include the writing of conference papers and journal articles.

My identity as well as the identity of my school and school jurisdiction will be kept confidential throughout the project. In the thesis and subsequent uses of this research project, pseudonyms will be used and identifying characteristics will be removed to ensure that my remarks cannot be traced back to me. Only the researcher and his supervisor will have access to the raw data

Please feel free to contact my supervisor, Dr. Andre Grace (andre.grace@ualberta.ca), or myself (gilsmail@maxim.ca) if you have any questions or comments about this study.

_____ _____
Signature of Participant Date

_____ _____
Signature of Researcher Date

APPENDIX B

TRANSCRIBER'S CONFIDENTIALITY AGREEMENT

TRANSCRIBER'S CONFIDENTIALITY AGREEMENT

Gilbert Guimont
Tel: (780) 444–7183
E-mail: gilsmail@maxim.ca

Attention: _____
[Transcriber's Name]

Re: Confidentiality Agreement regarding involvement in a pilot research project entitled ***French Immersion in Different Settings: A Comparative Study of Student Achievement and Exemplary Practices in Immersion Centres Versus Dual- and Multi-Track Schools***

Because using achievement tests results to select schools for any purpose is a sensitive issue, I understand and accept that I am required to maintain strict anonymity and confidentiality in regard to this research. Therefore I agree to treat all information and materials confidentially and to respect the right of all research participants to anonymity as two terms of my involvement in this pilot study.

The purpose of the research is to investigate why students of certain schools achieve excellent results on provincial achievement tests. In my involvement with this study I will comply with using processes to provide accuracy of data, security, confidentiality, and anonymity that have been implemented in the design of the study. These include the following processes:

- A technical recording device will be used to ensure accuracy of data collected from the interviews.
- Security and confidentiality measures will be implemented, including the back up of data, secure storage of tapes, and a plan for deleting electronic and taped data.
- Only the researcher and his transcriber will have access to data and information.
- To ensure anonymity, pseudonyms will be used.
- I will return all disks, data, and rough drafts and erase transcripts from my computer.

Confidentiality Agreement to assist in a pilot research project entitled *French Immersion in Different Settings: A Comparative Study of Student Achievement and Exemplary Practices in Immersion Centres Versus Dual- and Multi-Track Schools*

Transcriber's Name: _____ Date: _____

Researcher's Name: _____ Date: _____

APPENDIX C

INTERVIEW QUESTIONS

INTERVIEW QUESTIONS

1. Describe your school to me.

   How many students/teachers? (if applicable : Number of student per program: French Immersion compared to English program, class size, number of classes. socioeconomic status of families, parental involvement, interesting particularities of your school like ethnicity of students, etc.) Are your teachers mostly Albertans or they come from different parts of the country? Talk about their differences. Teacher educational preparation/background. How is your school different from other immersion schools?

2. How do you explain the fact that students in your school have achieved better results on provincial achievement tests written in French than most students in French immersion in Alberta? (What are some of the factors?)

3. What are some of your actions and decisions, as a principal, that you feel might have an impact on the achievement of your students (climate, school culture, instruction)? What conditions exist in your school that promote student learning?

4. How, as an administrator, do you support your teachers in their efforts to help the students learn French (resources, possibilities of inservice, etc.)? How do you address workload issues (i.e. prep time)?

5. Are you unilingual?

   What do you do to encourage your students to learn French and do so well even though you are unilingual?

6. When a visitor enters your school for the first time, how would this person get the sense that it is a school offering French immersion?

7. How do you participate in the selection of the French immersion staff members that will be working at your school? What would be some of your criteria for the selection?

8. (For dual-track or multi-track administrators only) How do ensure harmonious relations between staff members involved in immersion and staff members involved in the other program(s)? How do you identify and address points of conflicts?

9. At what grade is the teaching of English formally introduced in your school? What impact does it have on the learning of French?

10. What happen to students who are experiencing academic difficulties? What type of support do you offer them to help them overcome their difficulties?

11. What is your student retention rate in French immersion from kindergarten to grade 6?

12. Were French-speaking parents or any parents used as a resource? In what type of activities? How involved were the parents of your school in learning activities? In supporting their children's learning?

You can base the answers to the next three questions on either your own experience or the contacts you had with other principals.

13. Why do you think students in immersion centers have better results on the provincial achievement tests than students in dual-track and multi-track schools?

14. Why do you think the difference between the test mean of students in immersion centers and the test mean of students in dual-track and multi-track schools is the smallest on the French language arts test? In other words, why are students in immersion centers and dual-track and multi-track school achieving results that are the most similar on the French language arts test?

15. Why do you think the results on the social studies provincial achievement test show the largest gap between students in immersion centers and students in dual-track and multi-track schools?

16. Have I missed anything that can help me to understand what you and your staff do at this school that sets you apart from other French immersion schools?